

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MASSACHUSETTS

RUOEY LUNG ENTERPRISE CORP.,

Plaintiff,

v.

TEMPUR-PEDIC, INTERNATIONAL  
INC.; TEMPUR-PEDIC SALES, INC.;  
TEMPUR-PEDIC NORTH AMERICA  
LLC; OPTIMA HEALTHCARE, INC.; and  
APEX HEALTH CARE  
MANUFACTURING, INC.,

Defendants.

**Civil Action No. 09-CV-11550-GAO**

*Leave to File Granted on  
January 5, 2011*

ASCION, LLC AND  
MARTIN RAWLS-MEEHAN

Plaintiffs,

v.

RUOEY LUNG ENTERPRISE CORP.  
AND LUNG-TAN SHIH

Defendants.

Civil Action No. 09-CV-10293-GAO  
Consolidated with the above action

**DEFENDANTS' MEMORANDUM OF LAW IN SUPPORT  
OF THEIR MOTION FOR SUMMARY JUDGMENT  
OF NON-INFRINGEMENT AND INVALIDITY**

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## INTRODUCTION

Defendants<sup>1</sup> have moved for summary judgment on the grounds that they do not make or sell beds covered by any claim of the patent-in-suit, U.S. Patent No. 7,448,100 (the “’100 patent”).<sup>2</sup> Each claim of the ’100 patent requires a “pliable mattress cushion” that is “attached or affixed” to **each** section of the underlying “skeletal frame.”<sup>3</sup> The accused beds have mattresses that are **not** attached or affixed to anything. Visible gaps between the mattresses and the beds make clear that the mattresses are not attached or affixed to **any** section – let alone to **each** section – of the frame.

Moreover, each claim of the ’100 patent requires that there be “**two** first links” supporting the head portion of the claimed frame. Although the accused beds previously had two stabilizer arms that the patent holder, Ruoeuy Lung, contends constitute “two first links,” the beds were redesigned in April 2009 to have only **one** stabilizer arm.<sup>4</sup> Ruoeuy Lung now takes the absurd position that “one” is equivalent to “two.” That is wrong as a matter of law.

The ’100 patent is also invalid. Its allegedly novel idea – a bed that can be adjusted while leaving the head portion abutting the wall – existed in the prior art.<sup>5</sup> The title of the ’100 patent (“Motorized Bed That Is Movably Closer To The Wall”) implies that such a benefit is new. The specification likewise describes the “primary objective” of the invention as “a motorized bed that

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<sup>1</sup> “Defendants” as used in this brief means all of the parties in this consolidated case accused of patent infringement by Ruoeuy Lung, including Ascion, LLC, Martin Rawls-Meehan, Tempur-Pedic, International, Inc., Tempur-Pedic Sales, Inc., Tempur-Pedic North America LLC, Optima Healthcare, Inc., and Apex Health Care Manufacturing, Inc.

<sup>2</sup> Exhibit A. All exhibits to this brief are attached to Defendants’ Motion for Summary Judgment of Non-Infringement and Invalidity.

<sup>3</sup> Claim Construction Order, D.I. 54.

<sup>4</sup> Ruoeuy Lung calls these “stabilizer arms” “links,” a point not disputed for purposes of this motion.

<sup>5</sup> Declaration of Dr. Jeffrey L. Stein in Support of Defendants’ Motion for Summary Judgment of Invalidity (filed herewith), at ¶ 11.

is movably closer to the wall” and further states that “[a]nother objective” is to allow the user to “easily and conveniently” reach items placed on a cabinet near the head of the bed.<sup>6</sup> Such beds – generally called “wall hugging beds” – have, however, been around for years.<sup>7</sup> Even the way in which the ’100 patent achieves its stated “wall hugging” objectives is amply described in the prior art.<sup>8</sup> In particular, the claims of the ’100 patent are anticipated by at least U.S. Patent No. 6,101,647 (“Stroud”),<sup>9</sup> and likewise by U.S. Patent No. 6,006,379 (“Hensley”).<sup>10</sup> There is no question of material fact.

For these reasons, and others explained in more detail below, the Defendants request the Court enter summary judgment that (1) the Defendants do not infringe any claim of the ’100 patent and (2) that each of the claims of the ’100 patent is invalid as anticipated. Unless mooted by the above rulings, Defendants alternatively request that the Court enter summary judgment that the “one arm” beds (*i.e.*, all but a small number sold prior to April 2009) do not infringe the ’100 patent either literally or under the doctrine of equivalents.

### **PREFACE: THE DISPUTE BETWEEN THE PARTIES**

In light of the Court’s recent claim construction ruling and Federal Circuit case law, summary judgment should enter as discussed in the sections that follow. To put this motion in context, however, Defendants present herewith an overview of how the parties ended up in this dispute. The facts outlined in this preface are supported by the record but it should be noted that even if Ruoe Lung disputes them, they are not strictly material to any of the issues argued in the summary judgment sections below.

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<sup>6</sup> ’100 patent at Col. 1, lns. 43-50.

<sup>7</sup> See, e.g., (Ex. D.) U.S. Patent No. 3,593,350, filed Mar. 13, 1969.

<sup>8</sup> See section III on invalidity.

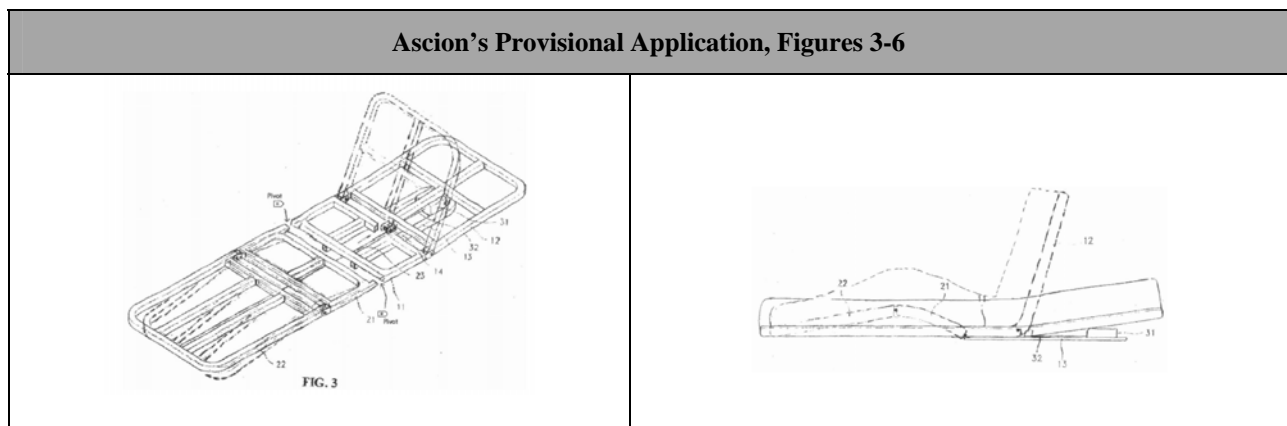
<sup>9</sup> Ex. B.

<sup>10</sup> Ex. 2.

\* \* \* \*

Martin Rawls-Meehan – the Managing Member of Ascion, LLC – came up with the idea for a type of adjustable bed in 2005. Later that year, Ascion and Ruoeey Lung entered into an agreement for Ruoeey Lung to make adjustable beds for Ascion to supply to its customers.<sup>11</sup> The agreement was memorialized in a contract entitled “Commission Agreement” (“Agreement”) and executed on November 22, 2005.<sup>12</sup> In connection with this Agreement, Rawls-Meehan disclosed his idea for the invention underlying the ’100 patent.<sup>13</sup>

In March of 2005, Rawls-Meehan filed a provisional patent application on one of Ascion and Ruoeey Lung’s adjustable bed designs, listing himself and Plaintiff Lung-Tan Shih, owner of Ruoeey Lung, as inventors.<sup>14</sup> Although the idea had primarily been Rawls-Meehan’s, he included Shih on the application to acknowledge that Shih had offered suggestions that were incorporated into the design. That application covered a design in which the mattress of the bed was directly attached to the skeletal adjustable frame sections – indeed, the mattress surrounded and encapsulated the frame to form an integrated mattress / frame unit:

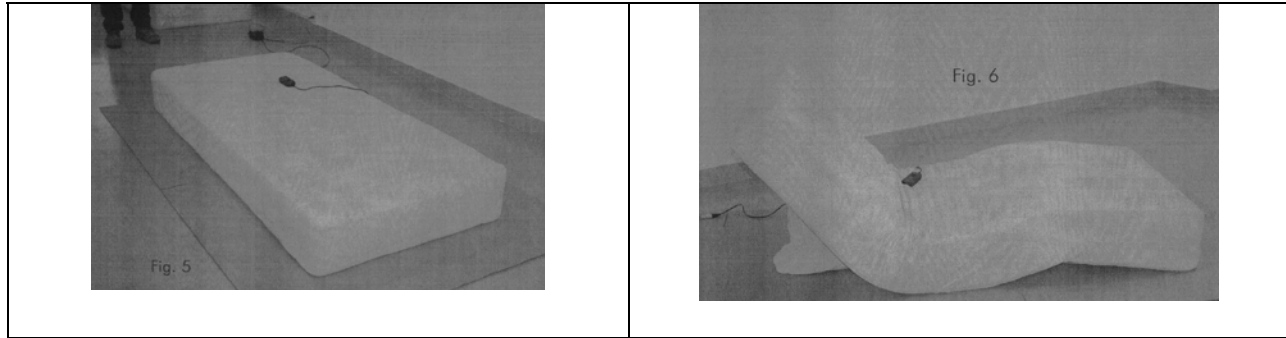


<sup>11</sup> Declaration of Mr. Martin Rawls-Meehan in Opposition to Ruoeey Lung’s Motion to Dismiss or Transfer, D.I. 15, at ¶ 2.

<sup>12</sup> Commission Agreement, D.I. 8-5.

<sup>13</sup> D.I. 15, at ¶ 5.

<sup>14</sup> Ex. E, “Ascion’s provisional application.”



Unlike traditional adjustable bed designs, the invention underlying Ascion’s provisional application could be used on a standard box spring.<sup>15</sup>

Unbeknownst to Rawls-Meehan, Shih filed his own patent application on June 21, 2006, which he assigned to his company, Ruoeuy Lung, (“Ruoeuy Lung’s application”), on a version of the invention claimed in Ascion’s provisional application.<sup>16</sup> As discussed in more detail below, Ruoeuy Lung’s application claimed mattresses attached to skeletal frame sections, but utilized a more traditional adjustable base instead of a standard box spring.<sup>17</sup> Ruoeuy Lung failed to cite Ascion’s provisional application to the U.S. Patent and Trademark Office (“Patent Office”) and failed to list Rawls-Meehan as an inventor. Ruoeuy Lung’s application matured into the ’100 patent.

Over the course of the Agreement, Ruoeuy Lung repeatedly manufactured defective products that required expensive repair work and resulted in Ascion’s losing major customers.<sup>18</sup> Ruoeuy Lung’s poor and unreliable workmanship forced Ascion to find alternative manufacturers,

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<sup>15</sup> Id.

<sup>16</sup> D.I. 15, ¶ 9.

<sup>17</sup> Compare ’100 Patent, Figs. 2, 4, 6, & 7, with Ex. E. Ascion’s Provisional Application, Figs. 3-7.

<sup>18</sup> D.I. 15, ¶ 12.

Defendants Optima Healthcare, Inc. (“Optima”) and Apex HealthCare Manufacturing, Inc. (“Apex”).<sup>19</sup>

Evidently thinking it could use its patent to stop Ascion from switching to a more reliable supplier, on October 2, 2008, Ruoeey Lung sent Rawls-Meehan the first page of a notice of allowance for Ruoeey Lung’s patent application and a figure from that application.<sup>20</sup> Ruoeey Lung, however, did not provide a copy of the actual application.<sup>21</sup> Through this correspondence and other emails, Ruoeey Lung suggested that it had patent rights covering Ascion’s bed design.<sup>22</sup> Ascion asked to see the whole patent.<sup>23</sup> Ruoeey Lung did not comply.<sup>24</sup> In December of 2008, Ascion located a copy of the ’100 patent on its own.<sup>25</sup>

Around the same time, Ruoeey Lung started sending threatening letters and emails to Ascion’s customers, including Tempur-Pedic<sup>26</sup> contending that the accused beds were covered by the ’100 patent.<sup>27</sup> Ascion asked Ruoeey Lung to stop and pointed out that since its patent was only a version of Rawls-Meehan’s own idea for an integrated mattress / adjustable frame unit, it should have named Rawls-Meehan as an inventor.<sup>28</sup> Ascion requested that Ruoeey Lung correct

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<sup>19</sup> Id. ¶ 13.

<sup>20</sup> Ex. F, Ascion’s Response No. 4 to Ruoeey Lung’s First Set of Interrogatories, “Ascion’s Interrog. Resp. No. 4” & Ex. G, attaching email string between Rawls-Meehan and Mandy Shin, ASCION0001723.

<sup>21</sup> Ex. F, Ascion’s Interrog. Resp. No. 4.

<sup>22</sup> Ex. G.

<sup>23</sup> Id.

<sup>24</sup> Id.

<sup>25</sup> Ex. F, Ascion’s Interrog. Resp. No. 4.

<sup>26</sup> Tempur-Pedic, International, Inc., Tempur-Pedic Sales, Inc., and Tempur-Pedic North America LLC, individually or collectively, “Tempur-Pedic.”

<sup>27</sup> Ex. H, attaching RL00165-168; RL00196-198.

<sup>28</sup> D.I. 15, ¶ 15.



its patent to list Rawls-Meehan as an inventor.<sup>29</sup> Ruoeey Lung seemed receptive to that idea at first, but ultimately refused.<sup>30</sup> In the mean time, Ruoeey Lung continued to threaten Ascion's customers with unfounded patent infringement claims. To resolve the issue, Ascion filed the Complaint seeking a declaratory judgment in this action. Ruoeey Lung later filed a parallel suit in California, but that case was transferred here and the two cases were consolidated.

## **FACTS**

### **A. Overview of the Motorized Bed Claimed in the '100 patent.**

The bed described by the '100 patent is made up of several components, including a "cushion" (*i.e.*, pliable mattress) [60], a stationary base frame [10], and an adjustable frame which is in turn made up of several sections: a first support frame [20], a linking frame [30], a second support frame [40], and a lift frame [50]:<sup>31</sup>

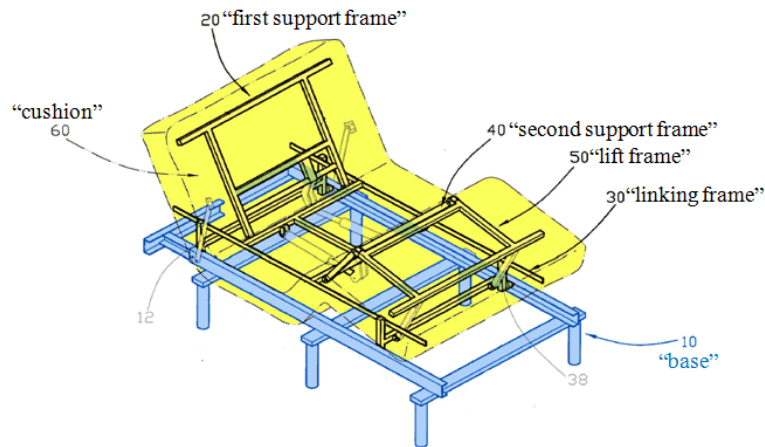


Figure 6

<sup>29</sup> Id.

<sup>30</sup> Id.

<sup>31</sup> '100 Patent, Claims 1, 14, & 18, emphasis added.

**1. Each Claim of the '100 patent Requires the Mattress to Be "Mounted" to Each Part of the Skeletal Frame.**

Each claim of the '100 patent requires that “a cushion mounted on the linking frame and having a first portion mounted on the first support frame to move therewith and a second portion mounted on the second support frame and the lift frame to move therewith.”<sup>32</sup>

In its Claim Construction order, the Court construed “mounted” to mean “attached or affixed to another element either directly or by means of a device or structure that facilitates or accomplishes the attachment.”<sup>33</sup> The Court further construed the term “mattress” to mean “a pliable mattress cushion.”<sup>34</sup> Finally, the Court construed the term “frame” to mean “a skeletal structure.”<sup>35</sup>

Accordingly, the “invention” defined by the claims of the '100 patent is an adjustable bed in which the mattress is attached or affixed to each of the skeletal, adjustable frame sections by means of a device or structure that facilitates or accomplishes its attachment to each of those sections. Such attachment can be accomplished by the mattress encapsulating the adjustable frame sections (the embodiment illustrated in Figure 6 from the '100 patent above, or in some other way) but what is clear from the '100 patent and the Court’s claim construction is that the two must be attached.

**2. All of the Claims of the '100 patent Require “Two First Links.”**

Each of the claims also requires “**two first links** each pivotally mounted between the base frame and the first support frame.”<sup>36</sup> Each of the two first links, labeled “12” below (Figure

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<sup>32</sup> Id. Emphasis is added throughout this brief unless otherwise noted.

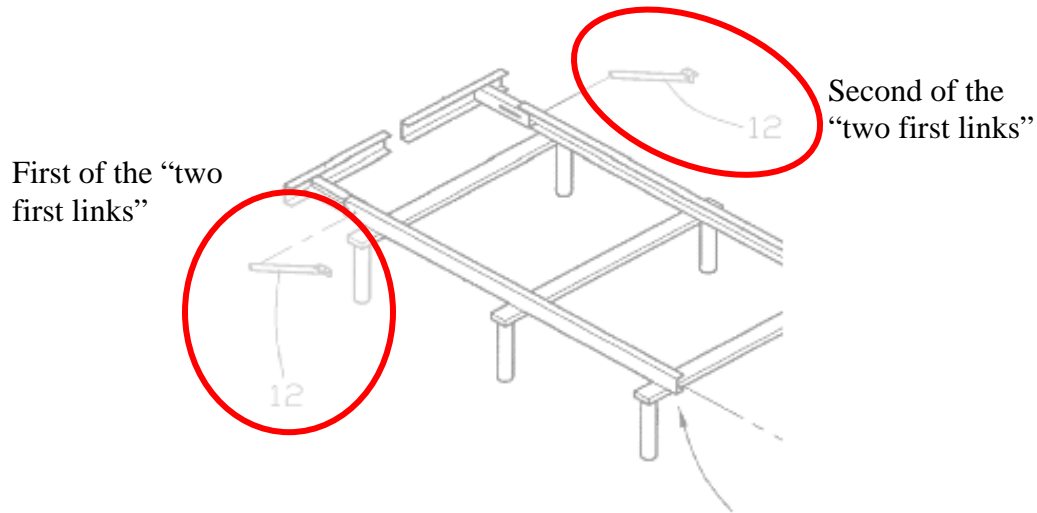
<sup>33</sup> D.I. 54 at 6.

<sup>34</sup> D.I. 54 at 5.

<sup>35</sup> D.I. 54 at 8.

<sup>36</sup> See, e.g., claim 1.

3 of the '100 patent), is directly and pivotally attached to a portion of the base frame and a portion of the first support frame:



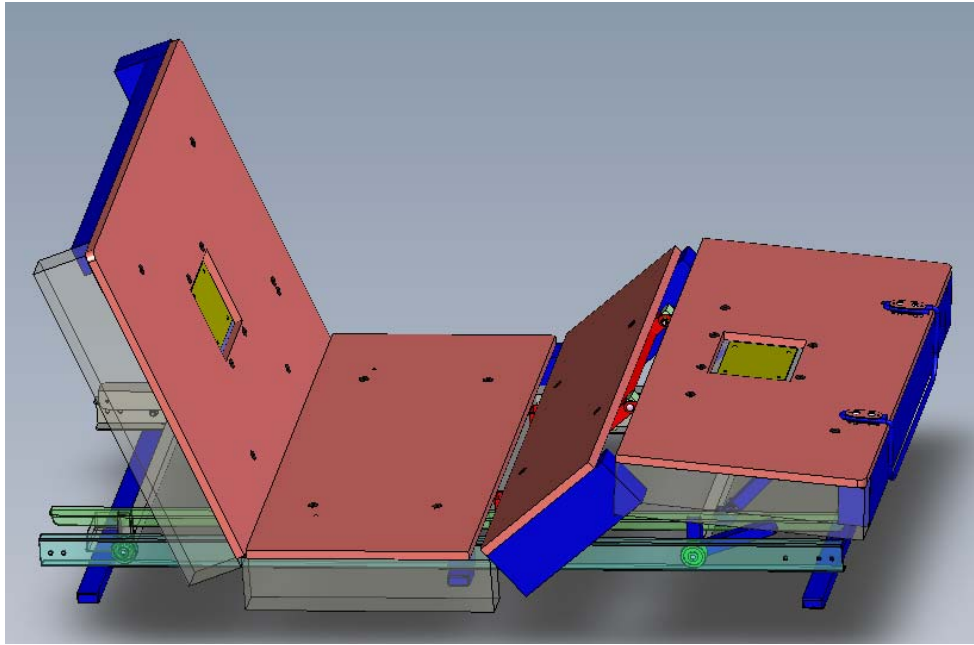
## **B. Overview of the Accused Adjustable Beds**

### **1. The Accused Bed's Mattresses Rest on Wood Boards – They Are Not Attached to Any Skeletal Frame.**

Ruoey Lung accuses three adjustable beds of infringement: the Reverie Deluxe Adjustable Bed, the Reverie Comfort Adjustable Bed, and the Advanced Ergo System Full Motion Bed (“the accused beds”).<sup>37</sup> For purposes of the non-infringement analysis set forth in this brief, these beds are structurally the same.

<sup>37</sup> Ex. I, Ruoe Lung’s and Lung-Tan Shih’ Response No. 4 to Ascion’s and Rawls-Meehan’s First Set of Interrogatories (“Ruoey Lung’s Interrogatory Response No. 4”), identifying the beds accused of infringement in this action).

Each accused bed has an underlying steel frame. Attached to this steel frame are four pieces of decking: a head board, back board, thigh board, and foot board, shown in pink below from left to right:<sup>38</sup>



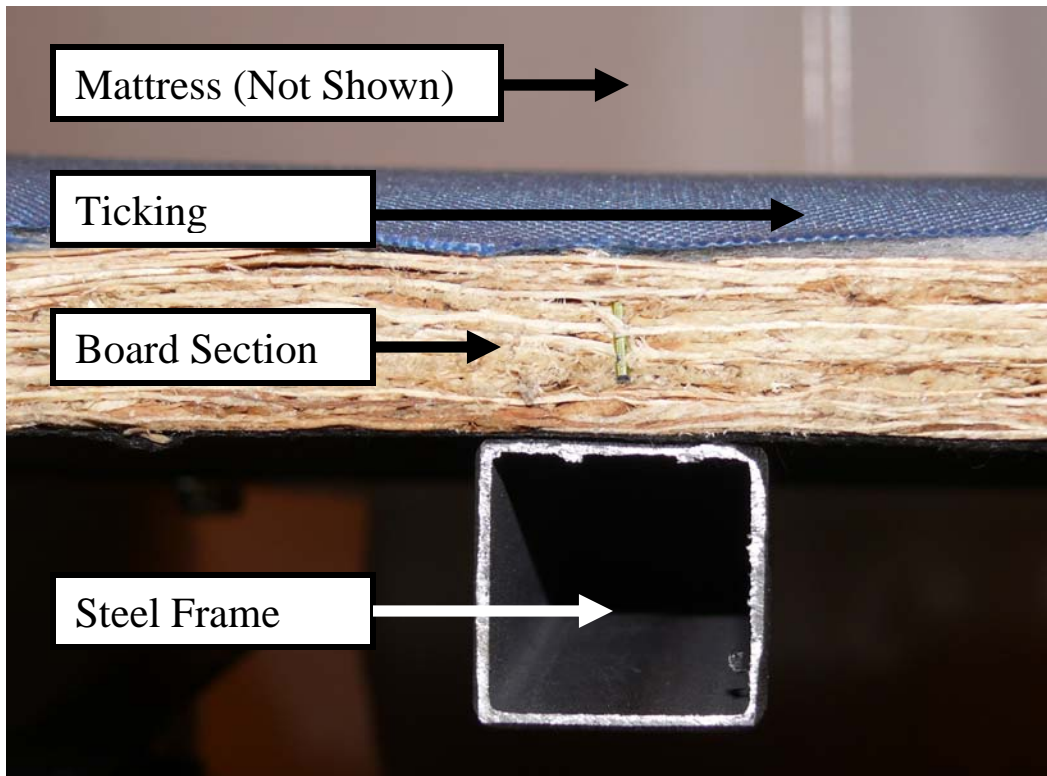
(Rawls-Meehan Decl. at ¶ 4)

The decking is covered with a thin protective material or “ticking” on which the mattress rests.<sup>39</sup> The ticking protects the mattress from direct contact with the rough wood platforms.<sup>40</sup> These four layers – steel frame, wood platform, ticking, and mattress – are shown in the close-up, cross-section photograph below (without the mattress):

<sup>38</sup> Declaration of Martin Rawls-Meehan in Support of Defendants’ Motion for Summary Judgment (“Rawls-Meehan Decl.”), at ¶¶ 3, 4.

<sup>39</sup> Rawls-Meehan Decl., ¶ 5.

<sup>40</sup> Rawls-Meehan Decl., ¶ 6.



The steel frame is approximately 1 inch thick, the wood platform is approximately 5/8 inch thick, the ticking is about 1/8 inch thick, and the mattress (not shown) would be over 8 inches thick.<sup>41</sup>

**2. In March of 2009, Ascion Redesigned the Accused Beds to Use Only a Single Stabilizer Arm.**

For a period of a few months in late 2008/early 2009, the Defendants sold the accused beds with two stabilizer arms (that Ruoeuy Lung argues constitute the “first links” of the claims) supporting the head portion of the frame. In March 2009, however, Ascion changed the design and directed its manufacturers, Apex and Optima, to manufacture the accused beds with only one stabilizer arm.<sup>42</sup> Specifically, Ascion’s new design removed the stabilizer arm on the adjustable bed’s right side (from the perspective of someone lying on the cushion).<sup>43</sup>

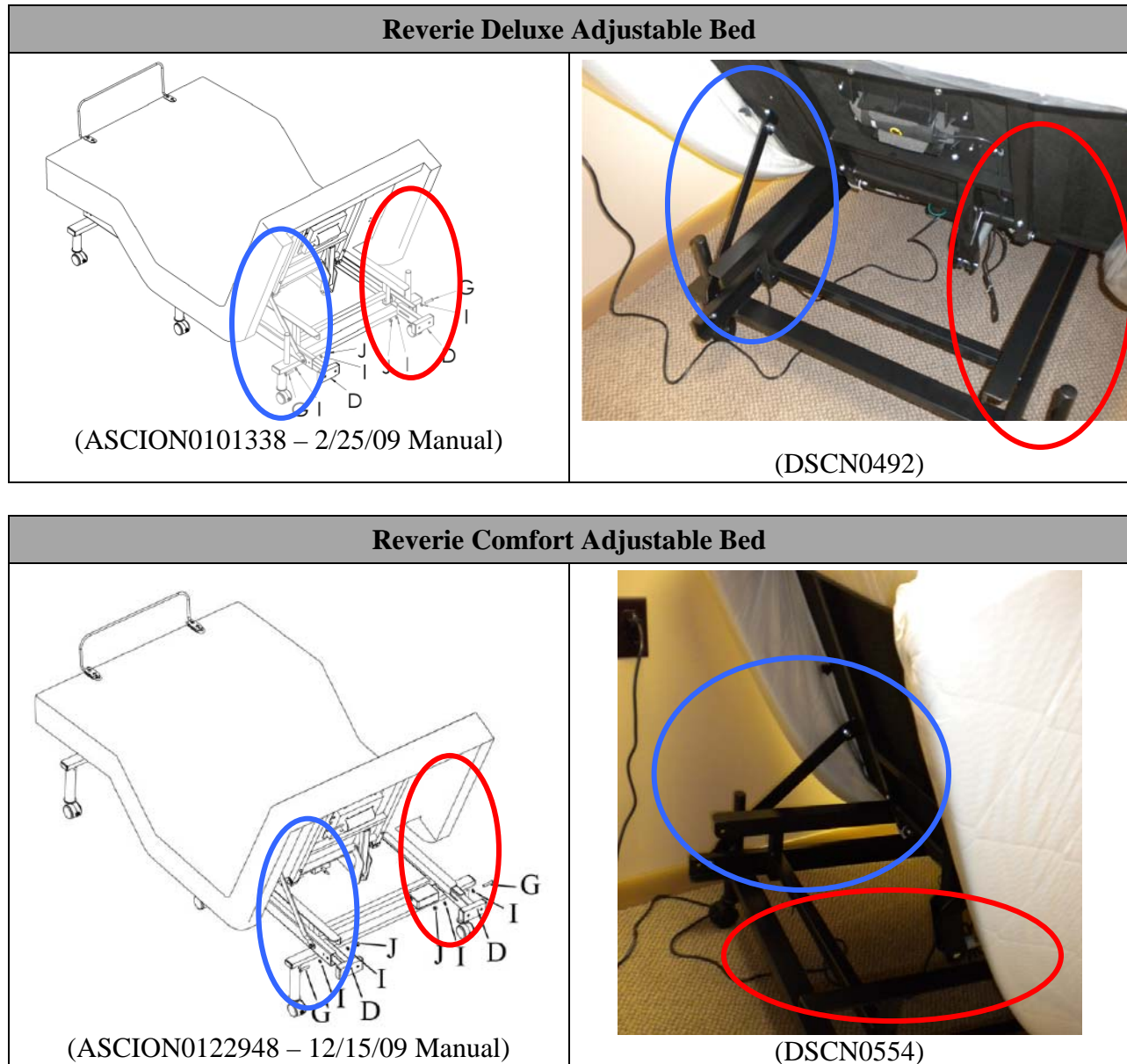
<sup>41</sup> Rawls-Meehan Decl., ¶¶ 7, 8.

<sup>42</sup> Ex. J ASCION0096616-96628 & 0096629-96641; see also Ex. I, Ruoeuy Lung Response No. 4, identifying the beds accused of infringement in this action).

<sup>43</sup> Id.

Accordingly, the vast bulk of the accused beds ever made, and all of those currently being made and sold, including to defendant Tempur-Pedic, have only one stabilizer arm.<sup>44</sup>

These one-arm beds are shown in the following images from 2009 owners' manuals and pictures taken by Ruoeey Lung at its inspection of the accused beds. (The single stabilizer arm is circled in blue and the absence of the second stabilizer arm is shown in red.)



<sup>44</sup> Rawls-Meehan Decl., ¶ 12.

Since the time of the '100 patent's issuance in November of 2008, the vast majority of the accused beds Defendants sold have included only one stabilizer arm. Specifically, as of August 2010, only about fourteen percent of the accused beds include two stabilizer arms.<sup>45</sup>

## **ARGUMENT**

### **I. SUMMARY JUDGMENT STANDARD**

Summary judgment is appropriate where, as here, “the pleadings, depositions, answers to interrogatories, and admissions on file together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law.” Celotex Corp. v. Catrett, 477 U.S. 317, 322 (1986). It is well established that “summary judgment is as appropriate in a patent case as it is in any other case.” C.R. Bard, Inc. v. Advanced Cardiovascular Sys., Inc., 911 F.2d 670, 672 (Fed. Cir. 1990).

### **II. THE ACCUSED BEDS DO NOT INFRINGE THE '100 PATENT AS A MATTER OF LAW.**

#### **A. The Mattresses Are Not “Mounted” to Each of the Adjustable Base Sections.**

The accused beds have two distinct components: (1) an underlying adjustable bed and (2) a freely removable mattress. There are at least three independent reasons why these beds do not infringe the “cushion mounted on the linking frame” limitation of the claims.

First and foremost, the mattresses are not “mounted” (*i.e.*, attached/affixed) to anything. They just sit there. Indeed, no disassembly, or detachment, is required to remove the mattress from the bed – one can just slide it off (albeit with some effort, as they are heavy). Every claim of the '100 patent requires the mattress to be “mounted.” As they are not, these beds cannot – as a matter of law – infringe any claim of the '100 patent.

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<sup>45</sup> Rawls-Meehan Decl., ¶ 13.

Second, the claims require mattresses that are mounted to the skeletal structure of the accused beds. The mattresses here do not even come into **contact** with the beds' skeletal structures – they rest on wood platforms covered with thin, protective ticking. Accordingly, even if a mattress could be considered “mounted” to some part of the bed (which it cannot since it is not attached), that mattress would still not be mounted to the *skeletal structure* of the accused beds.

Third, even if somehow the accused beds' mattresses could be considered to be mounted to one part of the “linking frame” (which they cannot for the above two reasons) they still are not mounted to *each portion* of the “linking frame” (*i.e.*, to each of the “first support frame,” the “second support frame,” **and** the “lift frame”), as the claims require.

**1. Ruoey Lung Must Show That the Accused Beds Meet Each and Every Limitation of the Asserted Claims.**

The infringement analysis is a two step process: “First, the court determines the scope and meaning of the patent claims asserted ... [and second] the properly construed claims are compared to the allegedly infringing device.” Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1454 (Fed. Cir. 1998) (*en banc*) (citations omitted).

The Court has already issued its claim construction ruling.<sup>46</sup> The second step of this process, comparison of the claims to the accused beds, is a question of fact as to which summary judgment of non-infringement is proper when the facts and inferences, when viewed in the light most favorable to Ruoeey Lung, would not persuade a reasonable jury to return a verdict that the accused beds infringe the patent. Business Objects, S.A. v. MicroStrategy, Inc., 393 F.3d 1366, 1371-72 (Fed. Cir. 2005).

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<sup>46</sup> D.I. 54.



To prove infringement, Ruoe Lung must show that the accused product meet each and every limitation of an asserted claim. Int'l Rectifier Corp. v. IXYS Corp., 361 F.3d 1363, 1369 (Fed. Cir. 2004). A failure to show how the accused beds meet even a single limitation of the claim justifies summary adjudication of non-infringement in favor of the Defendants:

“[S]ummary judgment of non-infringement is appropriate where the patent owner’s proof is deficient in meeting an essential part of the legal standards for infringement,” and “such failure will render all other facts immaterial.” Telemac Cellular Corp. v. Topp Telecom, Inc., 247 F.3d 1316, 1323 (Fed. Cir. 2001).

## **2. The Mattresses of the Accused Beds Are Not Mounted to Anything.**

Each of the ’100 patent’s claims requires “a cushion mounted on the linking frame and having a first portion mounted on the first support frame to move therewith and a second portion mounted on the second support frame and the lift frame to move therewith.”<sup>47</sup> As illustrated above, the “first support frame,” “linking frame,” “second support frame,” and the “lift frame” are the claimed beds’ adjustable frame sections.

The Court construed the term “cushion” to mean “a pliable mattress cushion.”<sup>48</sup> It construed the term “mounted” to mean “attached or affixed to another element either directly or by means of a device or structure that facilitates or accomplishes the attachment.” Accordingly,

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<sup>47</sup> ’100 Patent, Claims 1, 14, & 18.

<sup>48</sup> D.I. 54 at pp. 4-5. The Court only construed this term to resolve any doubt as to whether a mattress must be pliable: “The Ascion defendants propose defining the cushion as a ‘mattress,’ which seems sensible enough since the invention is, after all, describing a ‘motorized bed.’ Ruoe Lung resists that simple synonym, however, apparently out of concern that ‘mattress’ implies a rigid or unbendable structure. (An unbendable “cushion” will not work in this invention, of course, much of the point of which is to bend the cushion.) Mattresses may come in a variety of designs and compositions, and while relative rigidity may be a not uncommon feature, it is not an essential one; a pliable mattress is not an oxymoron.” Id.

every claim in the '100 patent requires the mattress to be “attached or affixed” to each adjustable frame section.

The mattresses of the accused beds rest unattached, on top of platforms: They are never glued, tied, stapled, bolted, strapped, sewn, or otherwise attached or affixed to anything.<sup>49</sup> Indeed, when an accused bed is in operation, the mattress can slide (something that could not happen if the mattress were mounted) as seen in the red circle in the picture below:



**Reverie Deluxe Adjustable Bed (Only Foot Section Raised)**

In sum, the mattresses of the accused beds do not meet the fundamental requirement to be “mounted” as that term has been construed by the Court. They cannot – as a matter of law – infringe any claim of the '100 patent.

Moreover, the claims do not just require that the mattress of an infringing bed be “mounted” to something – they require the mattress be mounted to *each section* of the adjustable bed frame: “a cushion **mounted on the linking frame** and having a first portion mounted on the **first support frame** to move therewith and a second portion mounted on the **second support**

<sup>49</sup> Rawls-Meehan Decl. ¶ 21.

**frame** and the **lift frame** to move therewith.”<sup>50</sup> The claims further specify that the type of mounting employed be sufficient to allow the mattress “**to move**” **with** each adjustable frame section.<sup>51</sup> None of these limitations are found in the accused beds.

For example, when an accused bed is operated, the mattress does not “move” with each frame section; instead, it lies across a gap formed by the platforms:



**Advanced Ergo System Full Motion Bed (Head and Feet Raised)<sup>52</sup>**

<sup>50</sup> ‘100 Patent, Claims 1, 14, & 18.

<sup>51</sup> ‘100 Patent, claims 1, 14, and 18.

<sup>52</sup> Rawls-Meehan Decl., ¶ 14



**Advanced Ergo System Full Motion Bed (Only Foot Section Raised)<sup>53</sup>**

The fact that such a gap appears when the beds are operated without a person laying on them makes clear that the mattresses are not mounted to each frame section. Indeed, when just the foot section of the adjustable bed is raised, as in the image above, there is no contact between the mattress and the underlying foot portion of the adjustable base at all.<sup>54</sup> (Note that, during normal operation, the weight of the user will better conform the mattress to the adjustable base; these images are shown without a user simply to highlight that the mattress and underlying portions of the bed are not attached.)




### **3. The Mattresses of the Accused Beds Rest on Platforms and are Not Mounted to Skeletal Frame Sections.**

Even if the accused beds' mattresses were "mounted" to something under them – *e.g.* the ticking-covered plywood decking (which they are not), they still would not be mounted to the "skeletal frame" as required by each of the asserted claims.

<sup>53</sup> Rawls-Meehan Decl., ¶ 15.

<sup>54</sup> Rawls-Meehan Decl., ¶ 15.

The claims require an infringing bed to have a mattress that is mounted to each adjustable “frame” section, construed by the Court to mean “skeletal structure.”<sup>55</sup> The mattresses rest on wood platforms (or the ticking that covers them to prevent splinters),<sup>56</sup> *not* the underlying skeletal steel frame. The mattress never even comes into contact with the adjustable, skeletal frame sections underneath the wood platforms. Below are images of the accused beds with the mattresses slid off to reveal the blue ticking covering the wood platforms.

		
<b>Reverie Deluxe Adjustable Bed (DSCN0491)</b>	<b>Reverie Comfort Adjustable Bed (DSCN0551)</b>	<b>Advanced Ergo System Full Motion Bed (DSCN0600)</b>

Accordingly, even if the mattresses of the accused beds could be considered “mounted” to something (which they are not), these mattresses are not mounted to the *skeletal frame* sections and therefore do not infringe any claim in the ’100 patent.

**B. The Accused Beds Do Not Have a Resting Bar Rested on the Mattress.**

Claims 1-13 require, among other things, that an infringing bed’s first support frame or head frame be “provided with a resting bar **rested on** the cushion.” The plain and ordinary meaning of “*rested on*” means that the “resting bar”<sup>57</sup> cannot be under the mattress – if one

<sup>55</sup> D.I. 54 at 8.

<sup>56</sup> Rawls-Meehan Decl., ¶ 6.

<sup>57</sup> Though not described in any detail in the specification, as the bar is part of the skeletal frame of the bed, the bar is presumably made of metal.

“rested on” a mattress, certainly s/he would not be lying underneath the mattress. Instead, these claims require the resting bar to be “resting **on**” the mattress.

None of the accused beds have a first support frame with a resting bar rested **on** the mattress. As detailed above, there is no portion of any accused adjustable bed’s frame that even comes into contact with the mattress, let alone a portion of the first support frame that rests on top of a mattress. For this reason alone, none of the accused beds infringe claims 1-13 as a matter of law.

### **III. RUOEY LUNG’S DOCTRINE OF EQUIVALENTS ARGUMENT FAILS AS A MATTER OF LAW: “ONE” CANNOT BE EQUIVALENT TO “TWO.”**

If the Court agrees that **none** of the accused beds infringe the ’100 patent for the reasons discussed above, it can stop here and not address this next issue. The vast bulk of the disputed beds are non-infringing, however, for the further reason that they have only one stabilizer arm, **not** the **two** required by the ’100 patent. The Court should grant summary judgment that the accused beds with one stabilizer arm do not infringe as a matter of law. Ruoeuy Lung already admits the one-arm<sup>58</sup> beds do not **literally** infringe the ’100 patent.<sup>59</sup> Instead, Ruoeuy Lung falls back on the “doctrine of equivalents” to argue that a single stabilizer arm meets the “two first links” limitation of the claims. But that doctrine does not reach as far as Ruoeuy Lung hopes. In particular, it does not allow the Court to find “two” to be equivalent to “one.”

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<sup>58</sup> For purposes of summary judgment, Defendants will assume, without conceding, that a stabilizer arm could be deemed a “first link” as that limitation is used in the ’100 patent.

<sup>59</sup> Ex. L, Defendants Ruoeuy Lung Enterprise Corp. and Lung-Tan Shih’s Further Supplemental Responses and Objections to Interrogatories 3 and 4 of Plaintiff Ascion, LLC and Martin Rawls-Meehan’s First Set of Interrogatories, at Response No. 5.

**A. Ruoeey Lung Must Prove Infringement of Each and Every Limitation in the '100 patent's Claims; No Claim Element Can Be Ignored.**

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Ruoeey Lung must show that the accused adjustable beds meet each and every limitation of an asserted claim in the '100 patent “literally or by *an equivalent*.” Int'l Rectifier Corp. v. IXYS Corp., 361 F.3d 1363, 1369 (Fed. Cir. 2004); Freedman Seating Co. v. Am. Seating Co., 420 F.3d 1350, 1358 (Fed. Cir. 2005). In other words, Ruoeey Lung can argue either that each limitation is literally present in the accused device, or that the doctrine of equivalents applies and that a specific limitation is met by an “equivalent” in the accused device. Freedman Seating Co., 420 F.3d at 1358.

*“Application of the doctrine of equivalents is the exception, however, not the rule... .”* London v. Carson Pirie Scott & Co., 946 F.2d 1534, 1538 (Fed. Cir. 1991). An inventor has a duty to carefully choose the words of his own patent's claims during prosecution and the public is entitled to rely on those choices. Id.; Sage Prod., Inc. v. Devon Indus., Inc., 126 F.3d 1420, 1423 (Fed. Cir. 1997).

To put limits on the reach of the doctrine of equivalents and ensure that competitors are free to “design around” a patent, the Supreme Court and Federal Circuit developed the “all limitations rule”: a patent holder must show that each and every limitation of a claim has been met on a limitation-by-limitation basis. Warner-Jenkinson Co., Inc. v. Hilton Davis Chem., Inc., 520 U.S. 17, 40 (1997). A primary consequence of the “all limitations rule” is that “an element of an accused product or process is not, *as a matter of law*, equivalent to a limitation of the claimed invention *if such a finding would entirely vitiate the limitation*.” Freedman Seating Co., 420 F.3d at 1358 (citation omitted).

At summary judgment, Ruoeey Lung must meet this threshold burden by showing that its application of the doctrine of equivalents does not vitiate the “two first links” limitation. Van

Blarcom Closures, Inc. v. Owens-Illinois, Inc., 507 F. Supp. 2d 214, 225-26 (E.D.N.Y. 2007)

(“[T]he Supreme Court and the Federal Circuit have held that summary judgment is appropriate when the court determines, *as a threshold matter*, that a finding of equivalents infringement would entirely vitiate a claim limitation.”) (citations omitted).

**B. Ruoe Lung’s Argument That “One” Is Equivalent to “Two” Impermissibly Vitiates the “Two First Links” Limitation.**

In determining whether a particular limitation is “vitated” by a doctrine of equivalents argument, the Federal Circuit has focused on (1) “the specificity and narrowness of the claim,” (2) “the simplicity of the structure,” and (3) “the foreseeability of variations at the time of filing the claim with the PTO.” Freedman, 420 F.3d at 1359. Here, analysis of each of these factors leads to the conclusion that Ruoe Lung’s doctrine of equivalents argument vitiates the “first two links” limitation. Indeed, courts have repeatedly held that a specific *number* is a claim limitation that cannot be end-run by the doctrine of equivalents.

**1. The Claims of the ’100 patent Are Specific and Narrow.**

“[I]f an invention is claimed narrowly and precisely, a patent holder cannot later expand his claims through the doctrine of equivalents.” Van Blarcom, 507 F. Supp. 2d at 224 (citing Sage, 126 F.3d at 223). Ruoe Lung did precisely that – it narrowly and precisely claimed its invention, in particular the aspect of “two first links.” Ruoe Lung cannot use the doctrine of equivalents to vitiate the plain language of the claims by defeating the specific numerical limitation which requires an infringing bed to have “**two** first links.” One cannot equal two. If it were otherwise, the claims would have no meaning.

The application of the claim vitiation doctrine is particularly clear in the case of numerical limitations; it is hard to be more specific than to claim a specific number of something. Accordingly, courts routinely reject patentees’ assertions that the doctrine of



equivalents can broaden a claim to cover a number of structures that differs from a numerical limitation in the claims. Summary judgment of non-infringement under the doctrine of equivalents is commonly granted in this context:

- “[B]y using the phrase ‘at least two,’ the limitation is expressly excluding using one identification. Any other interpretation would improperly vitiate the limitation.” In re Katz Interactive Call Processing Patent Litig., 2009 WL 1351043, at \*6 (C.D. Cal. May 1, 2009);
- **Three offset distances held not equivalent to two** offset distances in sports racket. Athletic Alternatives, Inc. v. Prince Mfg., Inc., 73 F.3d 1573, 1581-82 (Fed. Cir. 1996);
- “[N]o reasonable jury could find that the accused products either literally infringe or infringe by equivalents. ... [I]f the Court were to conclude that the Original H600 Filter—which had a **1:1 hanger-to-leg ratio**—was the equivalent to ‘a hanger having a pair of opposed legs configured to form a gap,’ it **would vitiate the element requiring that the hanger have a 1:2 hanger-to-leg ratio.**” Holmes Group, Inc. v. RPS Prods., Inc., 424 F. Supp. 2d 271, 288-290 (D. Mass. 2006);
- **One or fewer manual controls or light pens held not equivalent to a plurality of each** in video game control. Okor v. Sega of Am., Inc., 193 F. Supp. 2d 269, 284 (D. Mass. 2001);
- If claim could read on a product with only one structure, limitation reciting “at least two” such structures would be “meaningless.” Lantech, Inc. v. Keip Mach. Co., 32 F.3d 542, 547 (Fed. Cir. 1994);<sup>60</sup>
- “[B]oth claims clearly include the limitation requiring four induction units. The Q-360 clearly only has one induction unit. As such, the court cannot conclude that the Q-360 represents an ‘insubstantial change’ from the claim limitations of Claims 15 and 18 of the ‘353 patent, or that the Q-360 ‘performs substantially the same function in substantially the same way to obtain the same result.’” NuClimate Air Quality Sys., Inc. v. M&I Heat Transfer Prods., Ltd., 2008 WL 2917589, at \*21 (N.D.N.Y. July 24, 2008);
- “[I]f the Court were to determine that a pad having three periphery surfaces, one of which is curved, is equivalent to a pad with four periphery surfaces, it would entirely vitiate the meaning of the claim limitation of ‘four periphery surfaces.’” Farrago v. Rawlings Sporting Goods Co., Inc., 2008 WL 880178, at \*5 (E.D. Mo. Mar. 31, 2008).

<sup>60</sup> The case was remanded to the District Court to consider infringement under the doctrine of equivalents. Lantech, Inc. v. Keip Mach. Co., 32 F.3d 542, 584 (Fed. Cir. 1994). The District Court granted summary judgment of non-infringement under doctrine of equivalents (Lantech, Inc. v. Keip Mach. Co., No. 91-CV-721-RAE (Order date July 21, 1995)), which was affirmed *per curiam* by the Federal Circuit, 86 F.3d 1173, 1996 WL 233031, at \*1 (Apr. 5, 1996).

These cases make clear that the doctrine of equivalents does not allow a patentee to claim that “one” is equivalent to “two.” A numerical limitation has a meaning and that meaning must be followed.

**2. The Adjustable Beds at Issue Are Simply Structured.**

“Courts have resisted finding infringement under the doctrine of equivalents when the claimed invention is a simple structural device that can be easily described in words.” Van Blarcom, 507 F. Supp. 2d at 223. Unlike complex technical fields in which the English language may not have caught up to the technology, the ’100 patent involves a simple mechanical bed. It is not difficult to say “one” rather than “two” if that is what is meant.

**3. Beds With One Link Rather Than Two Were Readily Foreseeable When Ruoeuy Lung Filed Its Application.**

Courts further reject attempts of patentees, like Ruoeuy Lung, to use the doctrine of equivalents to extend their claim scope beyond foreseeable subject matter that they did not attempt to claim during the patent prosecution process. See Sage, 126 F.3d at 1425 (affirming summary judgment of non-infringement under doctrine of equivalents: “If Sage desired broad patent protection ... it could have sought claims with fewer structural encumbrances.... Instead, **Sage left the PTO with manifestly limited claims that it now seeks to expand through the doctrine of equivalents.**”); Van Blarcom Closures, Inc., 507 F. Supp. 2d at 225-26 (granting summary judgment of no infringement under doctrine of equivalents: “**the drafters of the ‘934 patent could easily have foreseen that claiming [narrowly] would surrender coverage over [alleged equivalents]. ...**”); see also Freedman, 420 F.3d at 1360-61. Ruoeuy Lung easily could have anticipated that an adjustable bed could operate with only one arm, so it could have claimed “at least one first link.” It did not and now must be held to its choice of claim language.

**C. Ascion Was Entitled to Design Around the “Two First Links” Limitation by Removing a Stabilizer Arm.**

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Ascion redesigned the accused beds, which were already noninfringing, as discussed in section II to use a single-stabilizer arm to make it even clearer that they do not infringe the '100 patent. This is not only a permissible business practice, it is “encouraged” as a matter of public policy:

One of the benefits of a patent system is its so-called “negative incentive” to “design around” a competitor’s products, even when they are patented, thus bringing a steady flow of innovations to the marketplace.

State Indus., Inc. v. A.O. Smith Corp., 751 F.2d 1226, 1235-36 (Fed. Cir. 1985); MS Gaming, Inc. v. Int’l Game Tech., 184 F.3d 1339, 1355 (Fed. Cir. 1999) (“[P]atent law encourages competitors to design or invent around existing patents.”).

Ascion did precisely what public policy encourages. Once it learned of the '100 patent, it arrived at an even more clearly non-infringing, functional design: removing one stabilizer arm, leaving the beds with only one accused “first link.” To use another court’s words, “[a]s between [Ruoey Lung] who had a clear opportunity to negotiate broader claims but did not do so, and the public at large, it is [Ruoey Lung] who must bear the cost of its failure to seek protection for this foreseeable alteration of its claimed structure.” See Sage, 126 F.3d at 1423. Now that Ascion relied on and designed around the claims of the '100 patent’s claims, Ascion cannot be made to suffer for Ruoe Lung’s decisions not to draft broader claims.

**IV. EACH CLAIM OF THE '100 PATENT IS INVALID AS ANTICIPATED BECAUSE EVERY ELEMENT CLAIMED IN THE '100 PATENT IS DESCRIBED IN PRIOR ART REFERENCES.**

If the Court should find that the Defendants do not infringe any claim of the '100 patent, the Court, again, can stop there – there is no need for the Court to consider the issue of invalidity. Nystrom v. Trex Company, Inc., 339 F.3d 1347, 1351 n.\* (Fed. Cir. 2003) (“We have previously

held that a district court has discretion to dismiss a counterclaim alleging that a patent is invalid as moot where it finds no infringement.”) (citations omitted). The ’100 patent, however, is invalid and the public would benefit from the Court invalidating it particularly if the Court does not grant summary judgment of noninfringement.

#### **A. Law of Anticipation**

“‘Anticipation’ means that the claimed invention was previously known, and that all of the elements and limitations of the claim are described in a single prior art reference.” Hakim v. Cannon Avent Group, PLC, 479 F.3d 1313, 1319 (Fed. Cir. 2007). The requirements for finding anticipation are the same as those for finding infringement, often expressed as the well-known rule “that which infringes, if later, would anticipate, if earlier.” Int’l Seaway Trading Corp. v. Walgreens Corp., 589 F.3d 1233, 1239 (Fed. Cir. 2009) (quoting Peters v. Active Mfg. Co., 129 U.S. 530, 537 (1889)). “Although anticipation under 35 U.S.C. § 102 is a question of fact, it may be decided on summary judgment if the record reveals no genuine dispute of material fact.” Golden Bridge Tech., Inc. v. Nokia, Inc., 527 F.3d 1318, 1321 (Fed. Cir. 2008).

#### **B. Overview of Prior Art Patents**

##### **1. Hensley – U.S. Patent No. 6,006,379**

The Hensley patent, entitled “Articulating Bed Frame,” describes frames that “permit the person on the bed to stay close to the adjacent night stand when the head portion is tilted upwardly”<sup>61</sup> – *i.e.*, “wall hugging beds” beds. In short, the beds described in Hensley serve the exact same purpose – and achieve that purpose in the exact same manner – as the “invention” of the ’100 patent. And as shown in the figure from Hensley below, the beds are also constructed in

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<sup>61</sup> Ex. C, Hensley at Col. 1, lns. 38-40.

the same manner as the '100 patent, including the use of a base frame and an articulating frame made up of four parts to support the head, torso, thighs, and feet of the users:

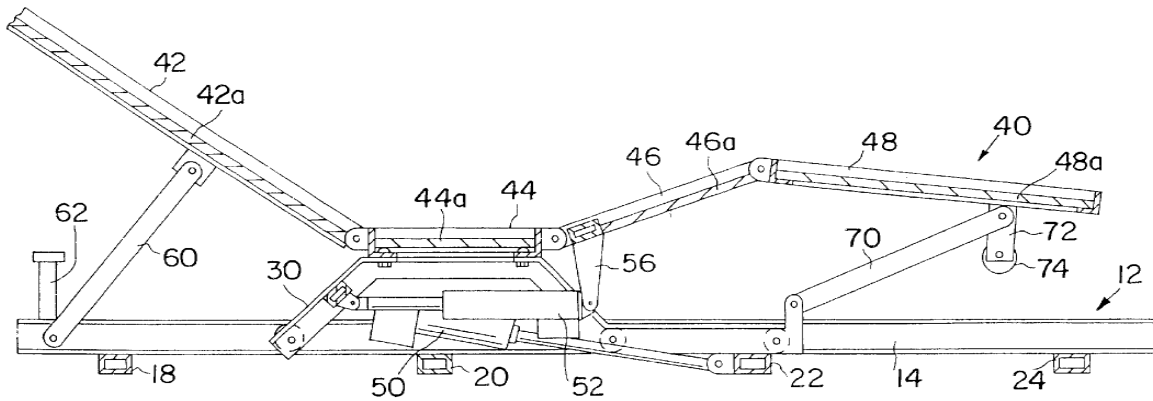


FIG. 5

## 2. Stroud – U.S. Patent No. 6,101,647

Like Hensley, the Stroud patent uses similar “wall hugging” technology “to maintain the user in the same position with respect to adjacent appliances and furniture as the head portion of the bed is moved between flat and elevated positions.”<sup>62</sup> At its most basic, the Stroud patent describes “wall hugger” beds made up of a head portion, center portion, thigh portion, foot portion, and motors.<sup>63</sup> These pieces interact in the same way the “invention” in the '100 patent operates.

### C. Stroud and Hensley Anticipate Every Claim in the '100 patent.

The '100 patent has three independent claims: Claims 1, 14, & 18. All of these claims, as well as their dependents, share the following eight elements (“Core Elements”):

- (1) a base frame;
- (2) a linking frame movably mounted on the base frame;
- (3) a first support frame pivotally mounted on the linking frame;

<sup>62</sup> Ex. B, Stroud at Col. 1, lns. 27-29.

<sup>63</sup> Stroud at Col. 2, lns. 21-40.

- (4) two first links each pivotally mounted between the base frame and the first support frame;
- (5) a second support frame pivotally mounted on the linking frame;
- (6) a lift frame pivotally mounted on the second support frame;
- (7) two second links each pivotally mounted between the linking frame and the lift frame;
- (8) a cushion mounted on the linking frame and having a first portion mounted on the first support frame to move therewith and a second portion mounted on the second support frame and the lift frame to move therewith.

Each claim of the '100 patent then adds additional limitations beyond these eight. All of these limitations (both core and additional) are disclosed in the prior art, in particular in the Stroud and Hensley patents.

**1. Stroud and Hensley Each Disclose the Eight Core Elements of the '100 patent Claims.**

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The Stroud and Hensley patents each contain all of the Core Elements of the claims. Set forth below is the claim language of the '100 patent (for the Core Elements) and the corresponding disclosures of Stroud and Hensley.

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(1) The '100 patent claims “a base frame [10];”

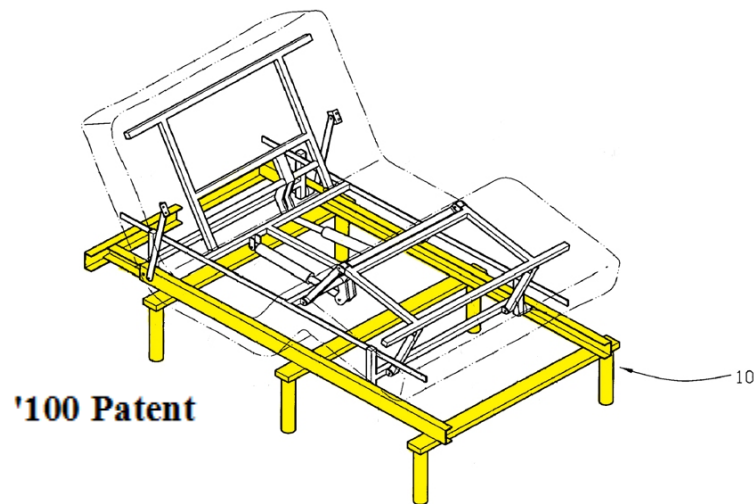
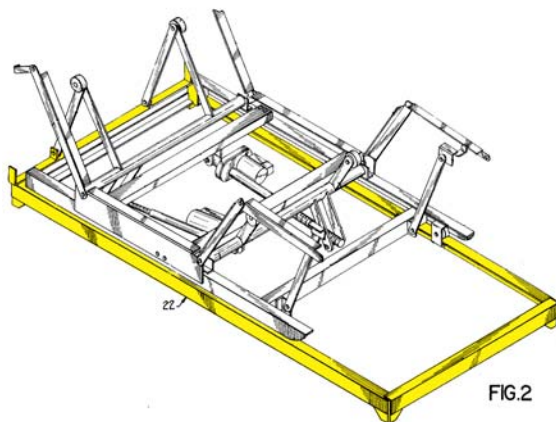
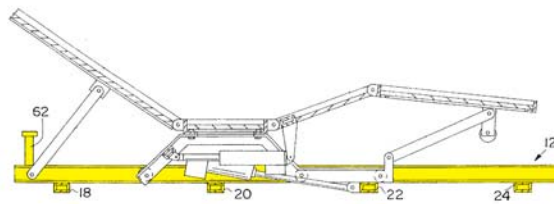


FIG. 6

- Stroud discloses “a lower frame;”<sup>64</sup>
- Hensley discloses “a base frame;”<sup>65</sup>



**Stroud**

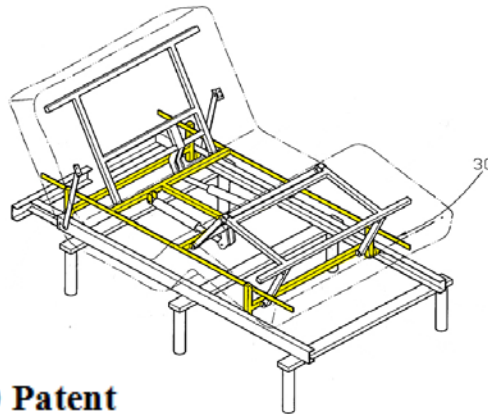


**Hensley**

<sup>64</sup> See, e.g., Stroud at Col. 3, Ins. 21-23; Col. 4, Ins. 31-32. Figure numbers from the patents are removed in quotes throughout this brief.

<sup>65</sup> See, e.g., Hensley at Col. 4, Ins. 50-55.

(2) The '100 patent claims "a linking frame [30] movably mounted<sup>66</sup> on the base frame;"<sup>67</sup>



**'100 Patent**

FIG. 6

- Stroud discloses an "upper frame movably mounted on a lower frame," the upper frame made up of "a head rail 33, a foot rail 34, ... left and right side rails 35, 36,"<sup>68</sup> "left and right center hinges 52, 54,"<sup>69</sup> and motor mount rails 94 and 120.<sup>70</sup>
- Hensley discloses a "seat frame section 44" and "a carriage 30 having rollers 32 [that] is mounted on the base frame 12 for rectilinear movement,"<sup>71</sup> along with an "articulating upperframe 40 ... mounted on the carriage 30."<sup>72</sup>

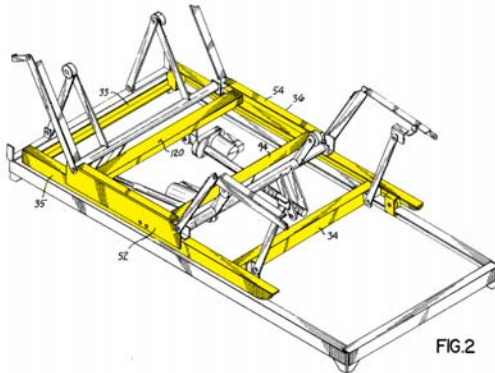


FIG. 2

**Stroud**

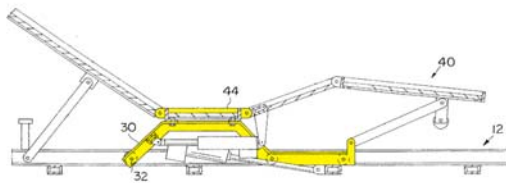


FIG. 5

**Hensley**

<sup>66</sup> The Court has construed "movably mounted" to mean "mounted in such a way as to permit the linking frame to move laterally (that is, toward the head or foot of the bed) in relation to the base frame." (D.I. 54 at p. 8.)

<sup>67</sup> The Court has construed "frame" to mean "a skeletal structure."

<sup>68</sup> Stroud at Col. 4, lns. 39-42.

<sup>69</sup> Stroud at Col. 5, lns. 20-30.

<sup>70</sup> Stroud at Col. 5, lns. 42-45; Col. 6, lns. 12-15.

<sup>71</sup> See, e.g., Hensley at Col. 4, lns. 55-65; Col. 5:27-28.

<sup>72</sup> See, e.g., Hensley at Col. 4, lns. 62-63.



(3) The '100 patent claims "a first support frame [20] pivotally mounted on the linking frame;"

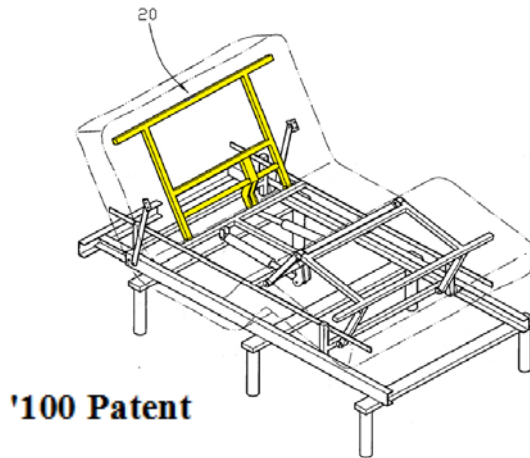


FIG. 6

- Stroud discloses "head hinges 58, 60 [that] are pivotally connected by pivot pins 62, for example, bolts and rivets, to respective left and right center hinges 52, 54,"<sup>73</sup> a "pair of head left [sic] lift arms 102 are angularly displaced on the actuator shaft 100," "crank arm links 98 [that] are rigidly connected to a head actuator shaft 100," and "[l]ift rollers 106 ... rotatably connected to the pivot joining the arms 102, 104;"<sup>74</sup>
- Hensley discloses that the articulating upperframe "comprises an upper body frame section 42, a seat frame section 44, a thigh frame section 46 and a lower leg frame section 48,"<sup>75</sup> such that the "upper body frame section 42 ... pivot[s] upwardly from the seat frame section 44."<sup>76</sup>

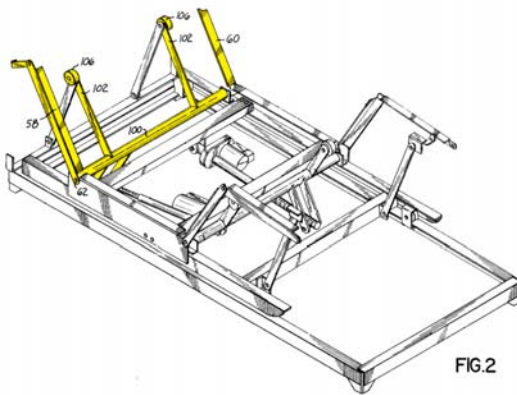


FIG. 2

**Stroud**

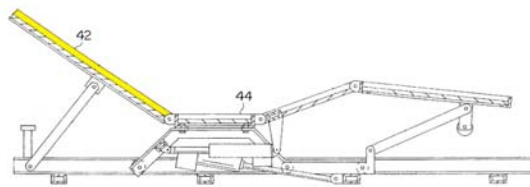


FIG. 5

**Hensley**

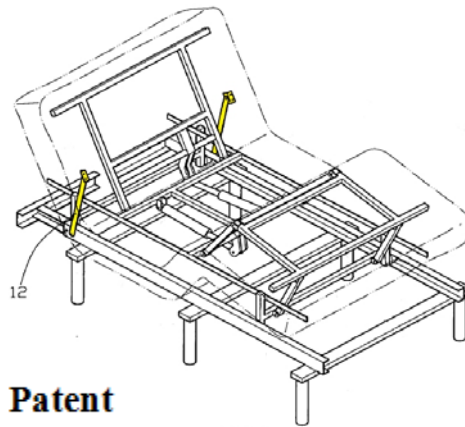
<sup>73</sup> Stroud at Col. 5, lns. 22-25.

<sup>74</sup> Stroud at Col. 5, lns. 47-60.

<sup>75</sup> Hensley at Col. 4, lns. 62-64.

<sup>76</sup> Hensley at Col. 5, lns. 1-4.

(4) *The '100 patent claims “two first links [12] each pivotally mounted between the base frame and the first support frame;”*



**'100 Patent**

FIG. 6

- Stroud discloses that “the head arm links 104 are pivotally connected to the head rail 26 of the lower frame;”<sup>77</sup>
- Hensley discloses that the “upper body frame section 42 is connected by links 60 to the head ends of the side rails 14,16... .”<sup>78</sup>

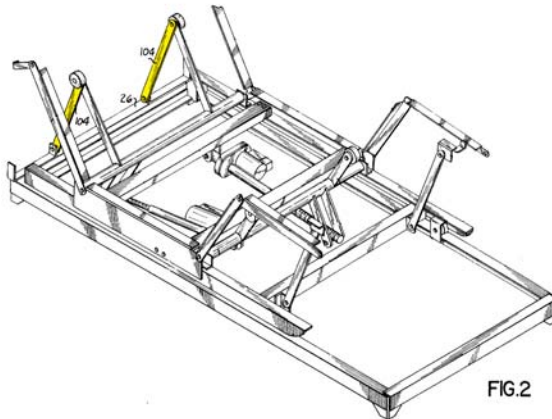


FIG. 2

**Stroud**

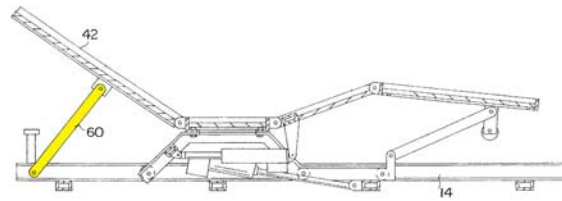


FIG. 5

**Hensley**

<sup>77</sup> Stroud at Col. 5, lns. 54-56. (Defendants note that the incorrect image from Stroud was inadvertently included in their proposed memorandum filed on December 8, 2010. (D.I. 129-1.) The Defendants inserted the correct image after the Court granted leave to file.)

<sup>78</sup> Hensley at Col. 5, lns. 65-66.

(5) The '100 patent claims “a second support frame [40] pivotally mounted on the linking frame;”

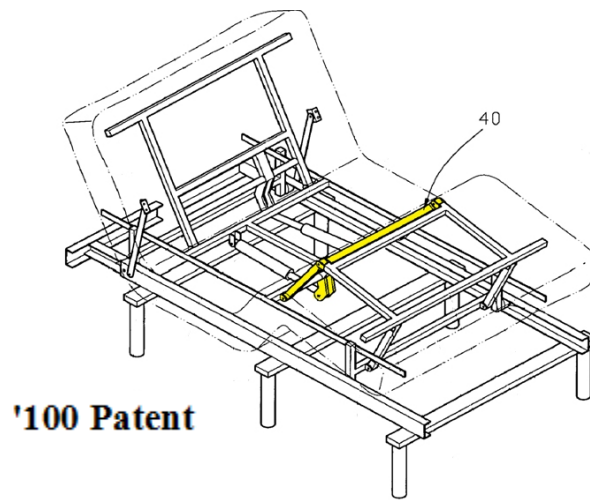


FIG. 6

- Stroud discloses a thigh support frame that includes, among other sections, “left and right thigh hinges 64, 66” that “are pivotally connected” to the “center hinges 52, 54;”<sup>79</sup>
- Hensley discloses the “thigh frame section 46” is part of the “articulating upper frame 40” which is “hinged together” in a manner that allows the thigh frame section to be lifted and lowered.<sup>80</sup>

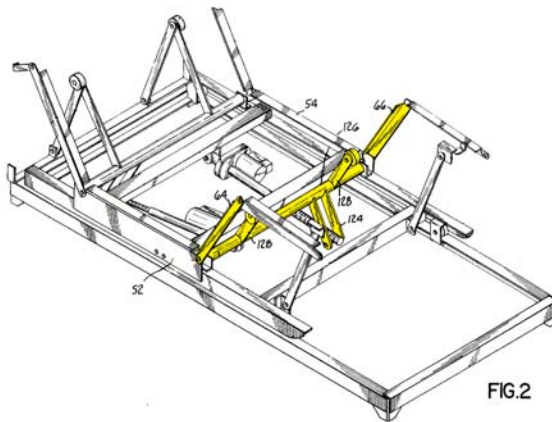


FIG. 2

**Stroud**

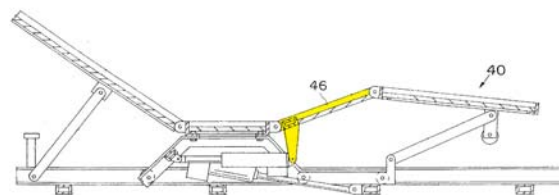


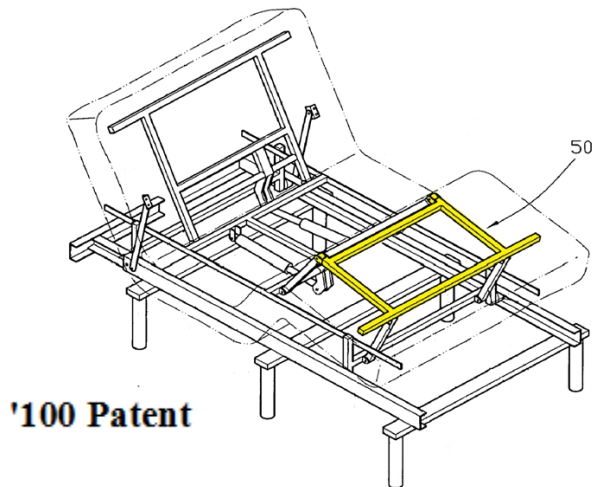
FIG. 5

**Hensley**

<sup>79</sup> Stroud at Col. 5, lns. 24-27.

<sup>80</sup> Hensley at Col. 4, lns. 62-65; Col. 5, lns. 62-64.

(6) The '100 patent claims “a lift frame [50] pivotally mounted on the second support frame;”



**'100 Patent**

FIG. 6

- Stroud discloses “left and right foot hinges 70, 72” that “are pivotally connected to” the “left and right thigh hinges 64, 66;”<sup>81</sup>
- Hensley further discloses that the “lower leg frame section 48” is mounted to the “thigh frame section 46” in such a manner that it “tilts” relative to the thigh frame section.”<sup>82</sup>

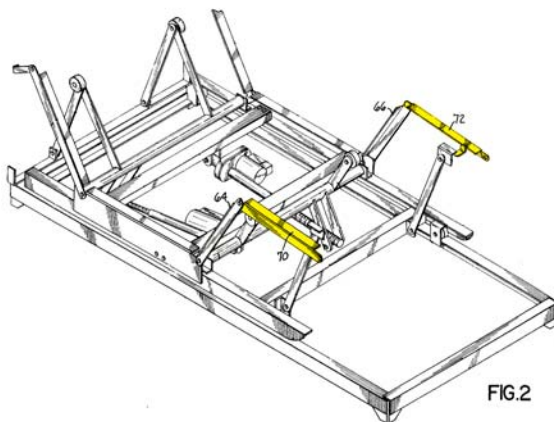


FIG. 2

**Stroud**

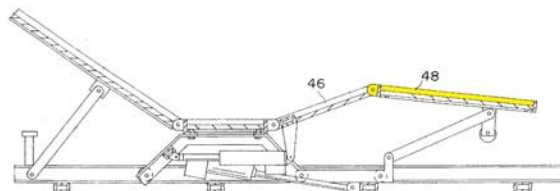


FIG. 5

**Hensley**

<sup>81</sup> Stroud at Col. 5, lns. 28-30.

<sup>82</sup> Hensley at Col. 4, ln. 62 – Col. 5, ln. 7.

(7) The '100 patent claims "two second links [38] each pivotally mounted between the linking frame and the lift frame;"

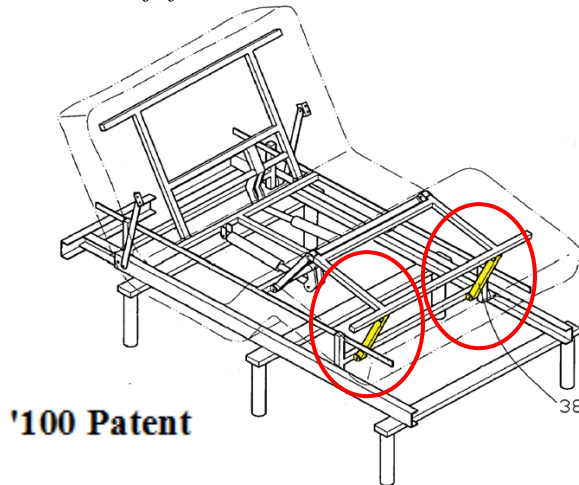


FIG. 6

- Stroud discloses a "pair of foot support arms 132 [that] are pivotally connected at their proximal ends to brackets 134 which in turn are rigidly connected to the foot end rail 34," which is part of the upper frame.<sup>83</sup> Further, the "foot support arms 132 are pivotally connected to brackets 136 which in turn are attached to the lower side 129 of the foot board 82" which connects to the foot hinges 72.<sup>84</sup>
- Hensley discloses "[a] pair of links 70 ... [that] are provided for controlling the movement of the lower leg frame section 48 relative to the base frame 12. The first and second ends 70', 70" of the links 70 are pivotally connected to the carriage 30 and the lower leg frame section 48 respectively."<sup>85</sup>

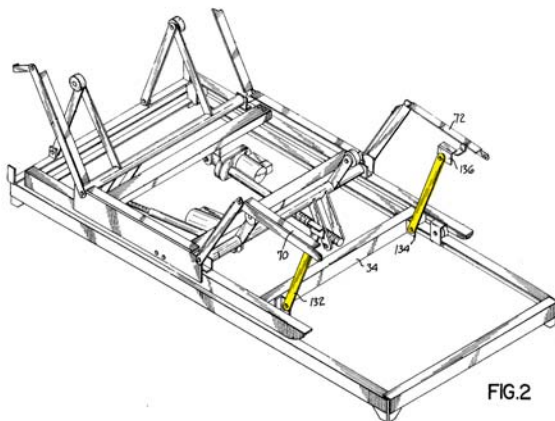


FIG. 2

**Stroud**

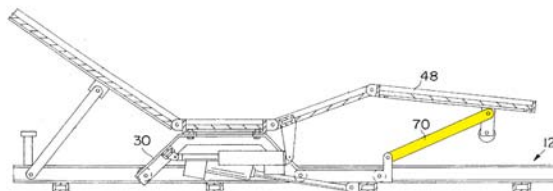


FIG. 5

**Hensley**

<sup>83</sup> Stroud at Col. 6, Ins. 25-28; Col. 4, Ins. 39-40.

<sup>84</sup> Stroud at Col. 6, Ins. 25-30.

<sup>85</sup> Hensley at Col. 6, Ins. 9-14.

(8) The '100 patent claims “a cushion [60] mounted on the linking frame and having a first portion mounted on the first support frame to move therewith and a second portion mounted on the second support frame and the lift frame to move therewith;”

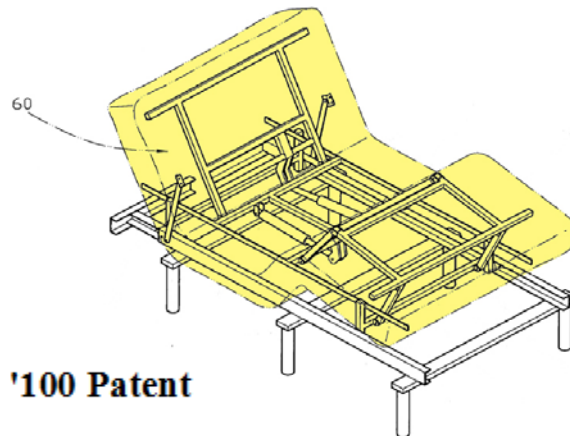


FIG. 6

- Stroud discloses “[a] mattress base 84, for example, a foam pad, [that] is mounted over and covers the head, center, thigh and foot boards 76-82” and a “mattress 86.”<sup>86</sup>
- Hensley discloses a “mattress disposed on the upper deck” of the adjustable bed, including “a thin foam pad ... disposed between the deck 540 and the mattress 500.”<sup>87</sup>

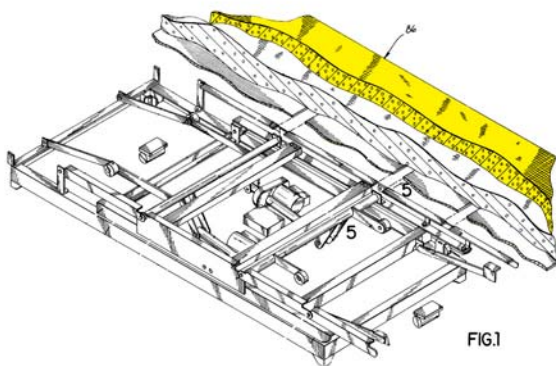


FIG. 1

### Stroud

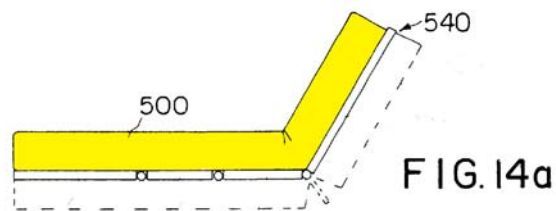


FIG. 14a

### Hensley

In each of Stroud and Hensley, the disclosed mattresses are not physically attached to the underlying skeletal frames – the mattresses merely lie on top of the underlying ticking and the

<sup>86</sup> Stroud at Col. 5, lns. 36-41.

<sup>87</sup> Hensley at Col. 4, lns. 43-47; Col. 9, lns. 1-6.



decking. If the Court finds that Ascion's mattress is somehow "mounted" to the linking frame, however, then Stroud and Hensley must each anticipate this claim element. Int'l Seaway Trading Corp., 589 F.3d at 1239 (quoting Peters v. Active Mfg. Co., 129 U.S. 530, 537 (1889)) ("that which infringes, if later, would anticipate, if earlier").

As shown above, each of the common eight Core Elements of the claims of the '100 patent are disclosed in the Stroud and Hensley patents.

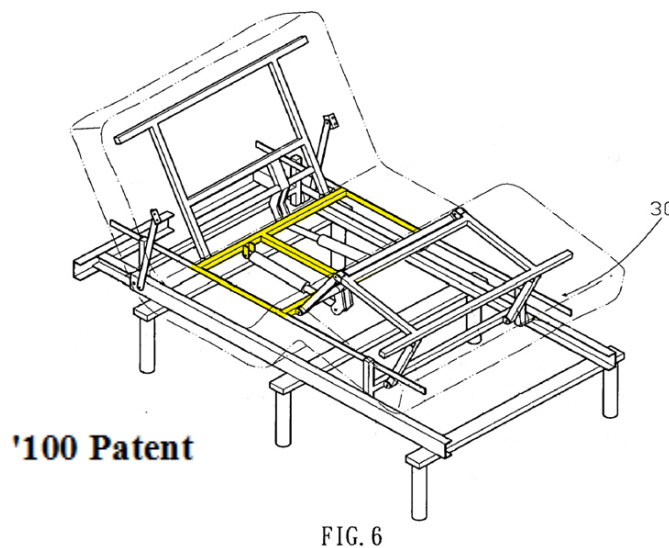
## 2. **Stroud and Hensley Disclose the Remaining Elements of the '100 patent Claims.**

The similarities between the '100 patent, Stroud, and Hensley do not end with the first eight Core Elements of the '100 patent's claims. Either Stroud and/or Hensley each independently disclose the remaining limitations of the '100 patent's claims.

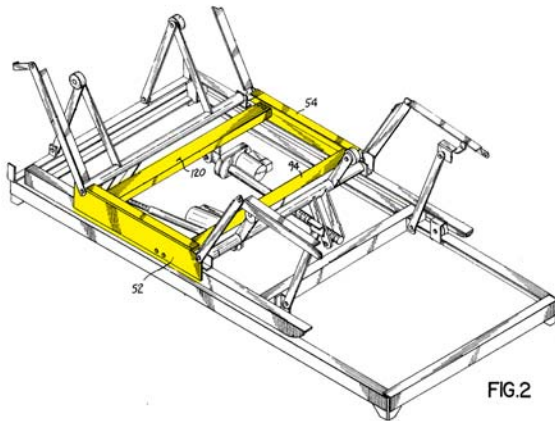
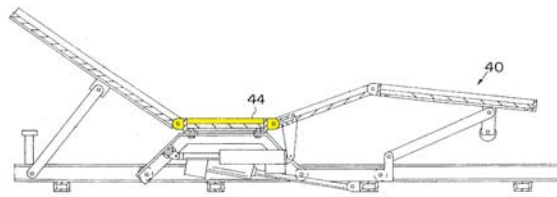
### (1) Remaining Elements of Claim 1

*"Wherein the linking frame has a mediate portion provided with a support bracket."*

As shown in the '100 patent below, the "support bracket" consists of multiple members:



- Stroud discloses a multipart “upper frame,” part of which includes a mediate portion provided with a multiple member support bracket made up of at least the “left and right center hinged members 52, 54”<sup>88</sup> and the “motor mount cross rails 94, 120.”<sup>89</sup> As shown below, all of these portions constitute the support bracket from the ’100 patent.
- Hensley discloses that the “articulating upper frame 40” comprises, among other portions, “a seat frame section 44.”<sup>90</sup> Hensley also discloses that the carriage 30 includes an unnumbered transverse strut member.<sup>91</sup> Accordingly, in Hensley, the “seat frame section 44” and the unnumbered transverse strut member of carriage 30 constitute a mediate portion with a support bracket.

**Stroud****Hensley**

*“The first support frame has [1] a first portion pivotally mounted on the support bracket of the linking frame and [2] a second portion provided with a resting bar rested on the cushion.”*

The first part of this limitation is shown in the ’100 patent figures as the bottom of the “first support frame” or head portion of the frame:

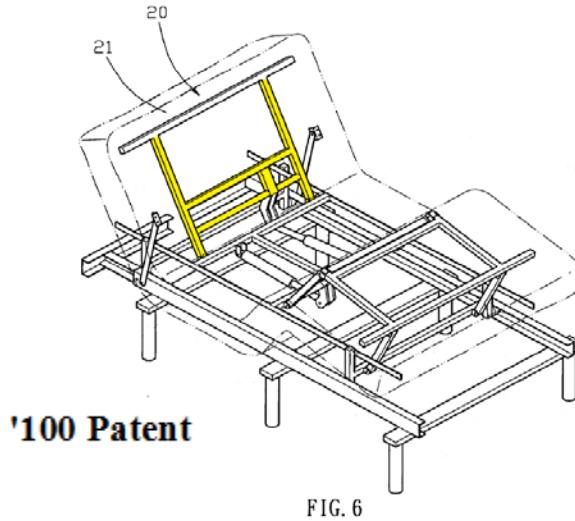
<sup>88</sup> Stroud at Col. 5, lns. 20-23.

<sup>89</sup> Stroud at Col. 10, lns. 15-17.

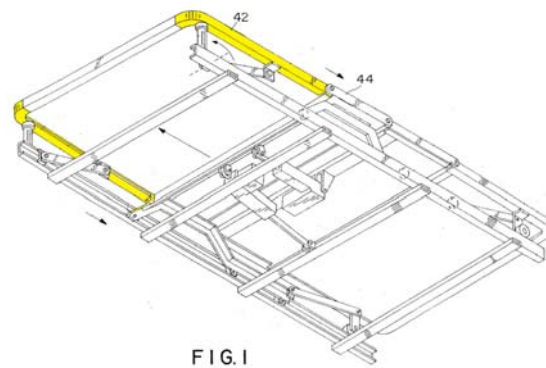
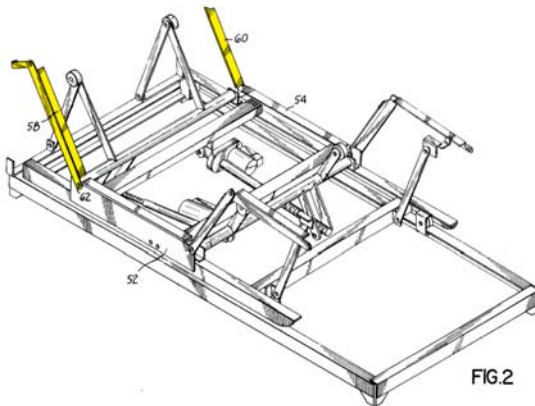
<sup>90</sup> Hensley at Col. 4, lns. 62-65.

<sup>91</sup> Hensley at 5:55-57 and Fig. 3.





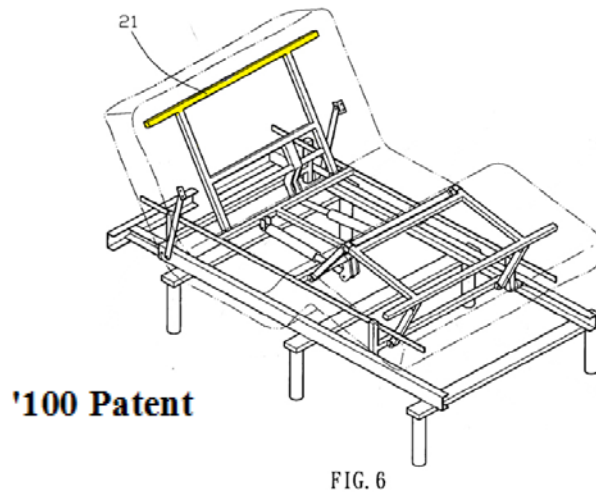
- The first part of this limitation is shown in Stroud's disclosure of "[l]eft and right head hinges 58, 60 [that] are pivotally connected by pivot pins 62 ... to respective left and right center hinges 52, 54;" the "head hinges" being the "first portion" claimed in the '100 patent and at least the "center hinges" constitute part of the "support bracket" claimed in the '100 patent.<sup>92</sup>
- The first part of this limitation is also shown in Hensley where the "upper body frame section 42" is mounted to the "seat frame section 44" in a way to allow the "upper body frame section 42 ... [to] pivot upwardly from the seat frame section 44 in a conventional manner."<sup>93</sup>



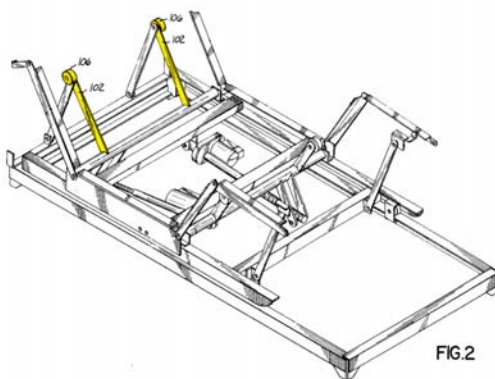
<sup>92</sup> Stroud at Col. 5, lns. 20-25.

<sup>93</sup> Hensley at Col. 4, ln. 62 – Col. 5, ln. 4.

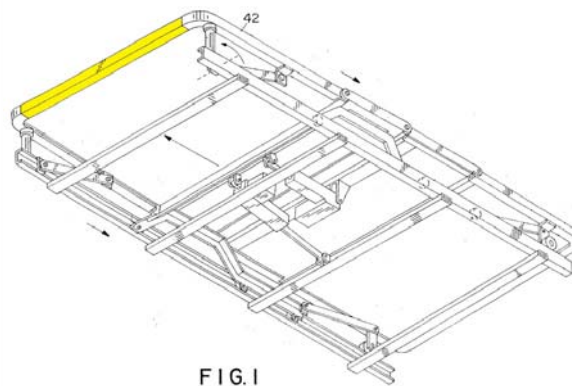
The second part of this limitation (“a resting bar rested on the cushion”) is not entirely clear, but if found (contrary to its plain language) to allow for the cushion to be rested **on the bar** (as in the accused beds) rather than the other way around, this limitation is disclosed in Hensley.



- Stroud discloses a “resting bar” that includes the “lift arms 102” and the “lift rollers 106.” Each combination of the lift arms and the lift rollers constitutes a “resting bar.”<sup>94</sup>
- Hensley’s figures disclose that the “upper body frame section 42” is generally U-shaped, such that it has an upper portion (at least the “bottom” of the U) that is a bar on which the cushion rests (indirectly through the panels that the frame directly supports).<sup>95</sup>



**Stroud**



**Hensley**

<sup>94</sup> Stein Decl. at ¶ 30.

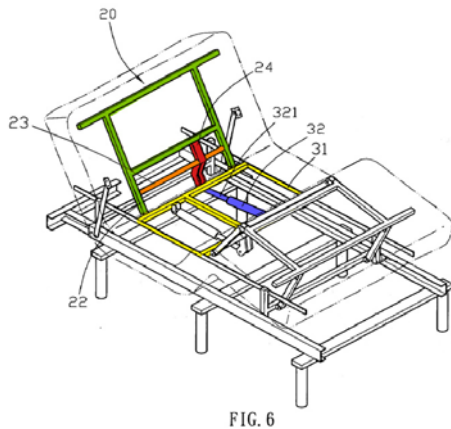
<sup>95</sup> Id.

(2) Dependent Claim 2

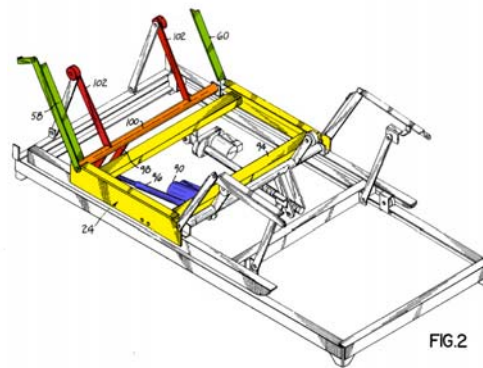
Claim 2 depends from claim 1, and so it also contains additional limitations:

[T]he motorized bed in accordance with claim 1, wherein the first support frame [green below] has a mediate portion provided with a transverse rod [orange] and a pivot arm having a first portion secured to the transverse rod [red], and the motorized bed further comprises a drive cylinder [blue] mounted between the linking frame and the first support frame and having a first portion pivotally mounted on the support bracket of the linking frame [yellow] and a second portion provided with a retractable rod pivotally mounted on a second portion of the pivot arm of the first support frame.

Stroud discloses all of the elements of claim 2. In Stroud, the first support frame (green) is made up of the “head hinges 58, 60,” the “lift arms 102,” the “actuator shaft 100,” and the “crank arm links 98,” among other parts. The actuator shaft in Stroud is the transverse rod of the ’100 patent (orange); the “crank arms links” along with the “lift arms” make up the pivot arm (pink); the “motor” 90 is the drive cylinder, which is mounted on one end to the “head motor mount rail 94”<sup>96</sup> (which constitutes part of the ’100 patent’s “support bracket” (yellow)) and the “distal end of the drive shaft 96 [or retractable rod] of motor 90 [(blue)] is pivotally connected to distal ends of head crank arm links 98.”<sup>97</sup> These elements are shown in the diagrams below:



**'100 Patent**



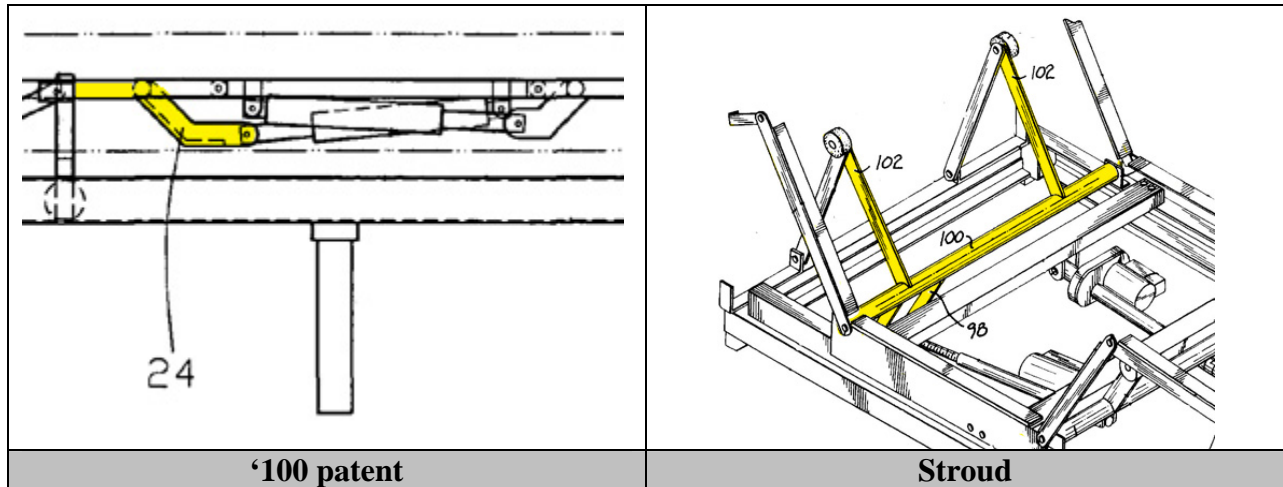
**Stroud**

<sup>96</sup> Stroud at Col. 5, Ins. 43-45.

<sup>97</sup> Stroud at Col. 5, Ins. 42-47.

(3) Dependent Claim 3

Claim 3 depends from claim 2, so contains the same eight limitations as claim 1, and the additional limitations added by claim 2. It also contains the additional limitation that the “pivot arm of the first support frame is substantially V-shaped.” In Stroud, the “substantially V-shaped pivot arm” is made by the “crank arm links 98” and the “head lift arms 102,” with the “head actuator shaft 100” connecting the two.<sup>98</sup> The crank arms and head lift arms are connected such that they are “angularly displaced ... by approximately 120°,”<sup>99</sup> or, in other words, a substantial V-shape:



<sup>98</sup> Stroud at Col. 5, lns. 45-48.

<sup>99</sup> Stroud at Col. 5, lns. 50-52.

(4) Dependent Claim 4

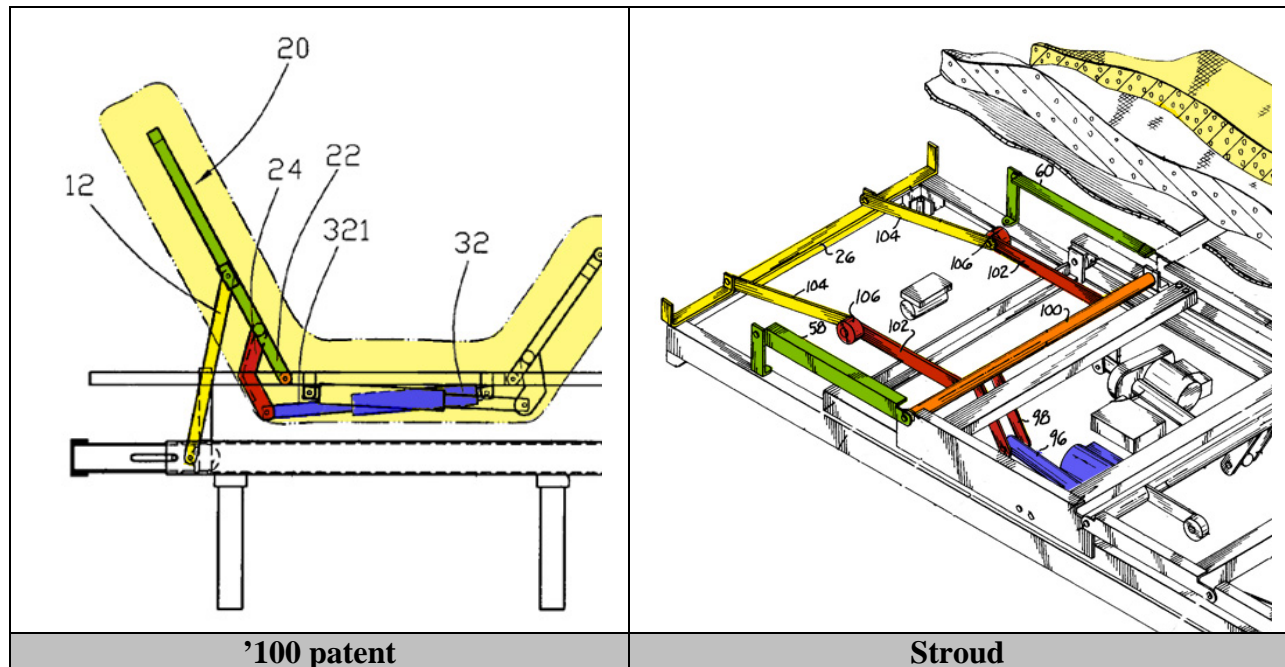
Claim 4 also depends from claim 2, so also includes the bed claimed in claim 1 in addition to the following limitations (annotated in the figures below):

when the retractable rod of the drive cylinder is folded outwardly [blue], the pivot arm [red] of the first support frame is pushed upwardly by the retractable rod of the drive cylinder [blue], so that the first support frame [green] is pivoted upwardly relative to the linking frame, and the cushion [light yellow] is moved upwardly with the first support frame [green];

when the cushion is moved upwardly with the first support frame, the cushion is driven by the first links [dark yellow 12] to move, and the linking frame is driven by the cushion to move on the base frame.

These limitations are described in detail in Stroud:

[t]he motor control 154 operates the head motor 90 [blue] in a manner to cause the drive shaft 96 [blue] to extend linearly away from the motor 90 toward the head end of the bed. By extending the drive shaft 96, ... the head lift arms 102 [red] move in a clockwise direction, thereby elevating the head lift rollers 106 [red] and the head board 76. ... As the head lift rollers 106 are elevated, the head actuator shaft 100 [orange] and the entire upper frame [red, orange, green] are translated toward the head end rail 26 [dark yellow].<sup>100</sup>

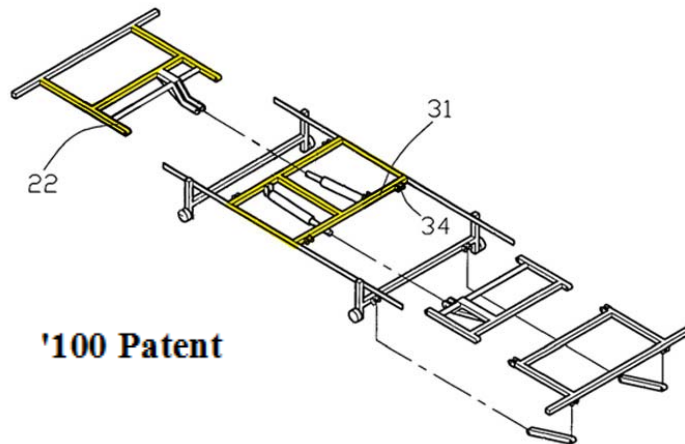


<sup>100</sup> Stroud at Col. 9, lns. 18-30.

(5) Dependent Claim 5

Claim 5 is also dependent on claim 1 and contains the following additional limitation:

wherein the support bracket of the linking frame [31] is provided with a plurality of pivot seats [34], and the first portion of the first support frame [22] is pivotally mounted on the support bracket of the linking frame by the respective pivot seats of the linking frame.



Stroud discloses the “pivot seats” of claim 5. On each side of the “left and right center hinges 52, 54” that make up part of the support bracket, the “head hinges 58, 60” are “pivotally connected by pivot pins 62.”<sup>101</sup> For these pieces to be “pivotally connected by pivot pins,” there must be a “pivot seat,” circled in red below, included to allow the two pieces to stay connected yet move relative to one another.<sup>102</sup>

Hensley also discloses the “pivot seats” of claim 5. On each side of the “seat frame section 44,” there are pivot points shown in the figures of Hensley, circled in red below.<sup>103</sup> At each of these pivot seats, the “upper body frame section 42” is pivotally attached:<sup>104</sup>

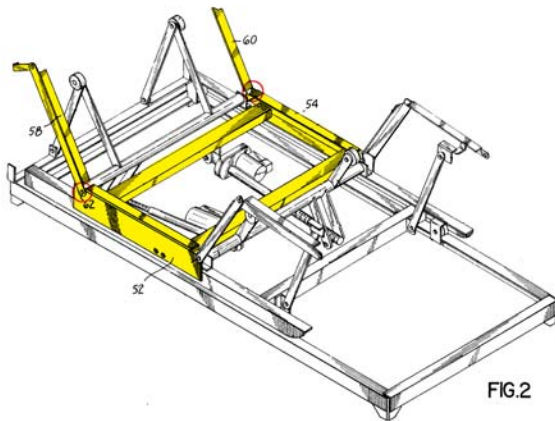
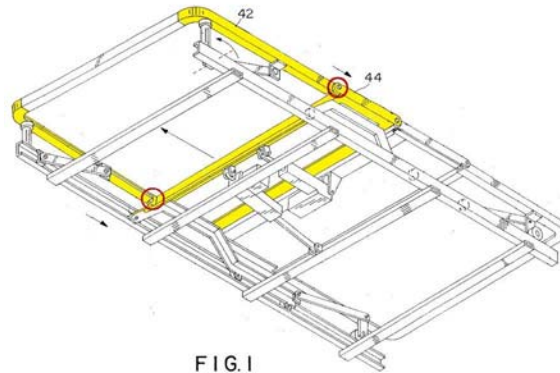
<sup>101</sup> Stroud at Col. 5, Ins. 20-25.

<sup>102</sup> Stein Decl., at ¶ 37.

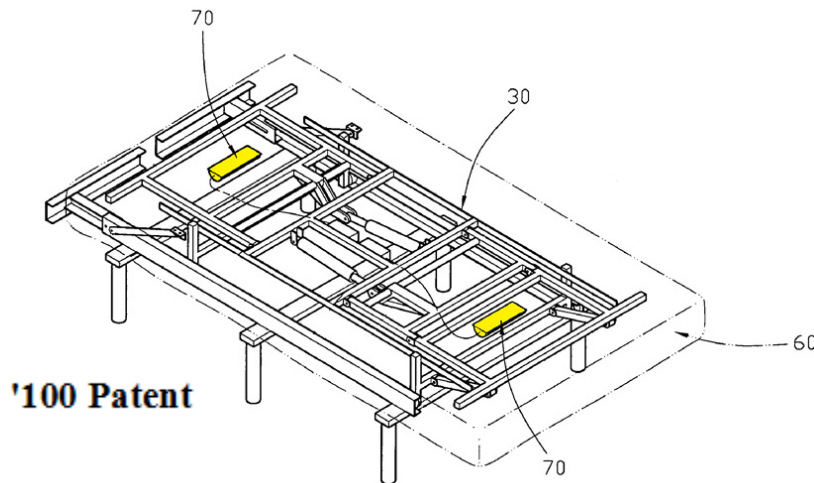
<sup>103</sup> Hensley at Figures 1 & 3.

<sup>104</sup> Id.



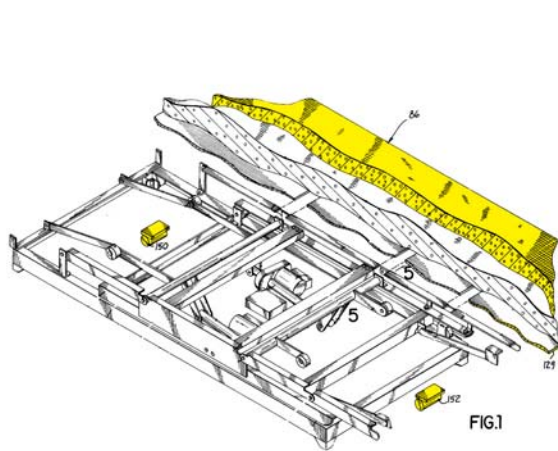
**Stroud****(6) Dependent Claim 6****Hensley**

Claim 6 is dependent on claim 1 and contains the additional limitation of “a motor mounted on the linking frame and located under the cushion.” The parties stipulated that the “motor” in claim 6 (shown as 70 in yellow below) is a “device that provides vibration to the cushion.”<sup>105</sup>

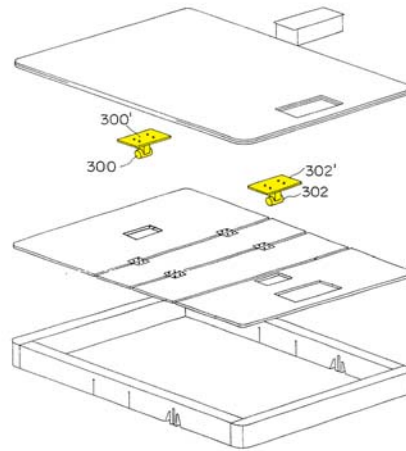
**'100 Patent**

<sup>105</sup> Ruoeey Lung's and Shih's Preliminary Claim Construction Brief (D.I. 79), at p. 19.

Stroud likewise discloses multiple “[m]assage motors 150, 152” mounted below the cushion (86).<sup>106</sup> Similarly, all of the motors used in Hensley (shown as 300 and 302 below) are under the cushion.



**Stroud**



**FIG. 12  
Hensley**

(7) Dependent Claims 7-13

Each of the dependent claims 7-13 are in effect mirror images of the earlier dependent claims, but focused on the thigh and foot sections of the bed as opposed to the head section of the bed. The mechanisms that operate the head portion of the beds claimed by the '100 patent and described in Stroud and Hensley and the mechanisms that operate the thigh and foot sections of those beds are materially identical, though the mechanisms are on opposite ends of the beds. Therefore, all of the arguments above concerning the “first support frame” of the '100 patent and the head frame described in Stroud and Hensley apply with equal force to dependent claims 7-13 when applied to the thigh and foot sections of the beds.<sup>107</sup> More detail, however, is provided in the chart in Appendix A.

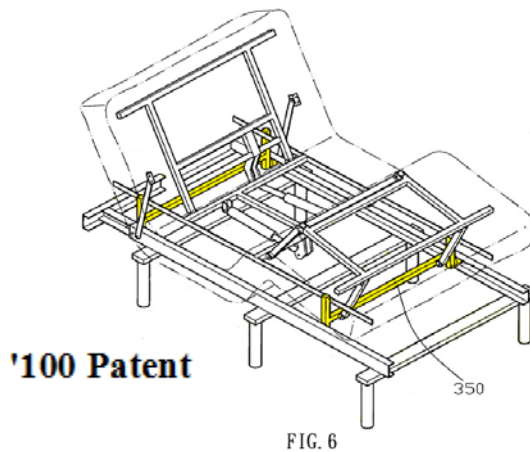
<sup>106</sup> Stroud at Col. 6, Ins. 38-40.

<sup>107</sup> Claim 13 is dependent on claim 12 and requires that the “second links” be pivotally mounted on “the resting bar” described in claim 1 and 12. As that “resting bar” must be “rested on the



(8) Independent Claim 14

Independent claim 14 contains all of the eight Core Elements that are shown in claim 1 and discussed in detail above. In addition to those Core Elements, claim 14 contains the additional limitation “wherein the linking frame has a first portion provided with a **first slide movably mounted** on the base frame and a second portion provided with a **second slide movably mounted** on the base frame.” The slides are shown in yellow in the ’100 patent below:



Stroud describes how the side rails (35, 36) and foot and head motor mount rails (94, 120) are movably mounted on the lower frame (22) by four wheels (37).<sup>108</sup> The “first slide” comprises the head portions of the side rails (35, 36) and the foot motor mount rail (120) and the “second slide” comprises the foot portions of the side rails (35, 36) and the head motor mount rail (94).

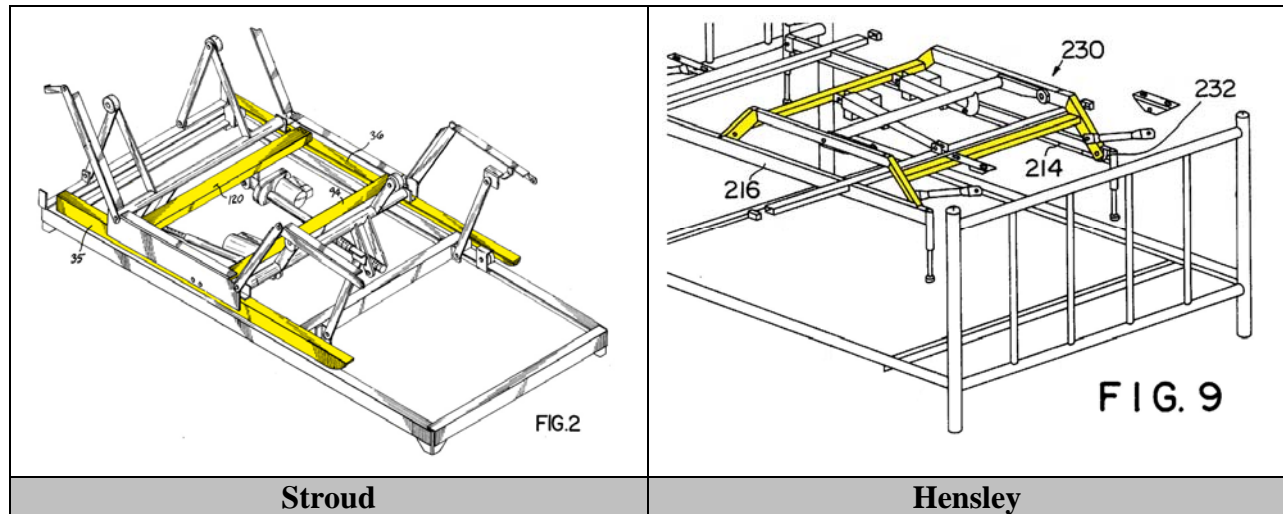
Hensley likewise anticipates claim 14 with its description of a carriage 230 having rollers 232 is mounted on the base frame for rectilinear movement. The inwardly facing channels 214,

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cushion,” it would be impracticable (at best) to have the second links go **through** the cushion to connect with the resting bar.

<sup>108</sup> Stroud at Col. 4, lns. 40-49; Col. 5, lns. 42-45; and, Col. 6, lns. 12-15.

216 of the base frame serve as longitudinally extending guides or tracks for rollers 232.<sup>109</sup> These verbal descriptions are reinforced by a comparison of the figures of the '100 patent, Stroud, and Hensley:



(9) Dependent Claim 15

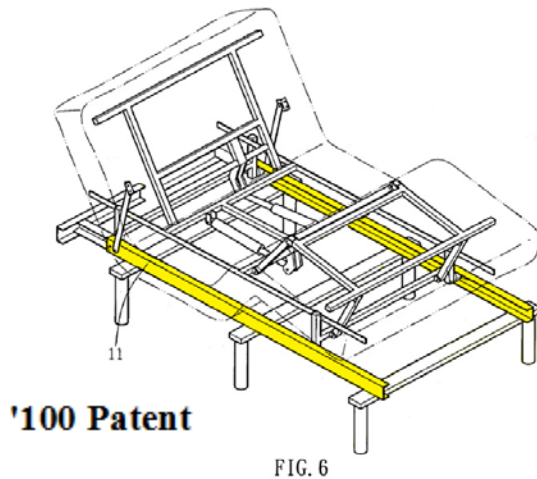
Claim 15 is dependent on claim 14, so includes all of its limitations and the additional limitation “wherein each of the first slide and the second slide of the linking frame is substantially H-shaped.” The two slides described in Stroud and Hensley are “substantially H-shaped,” as shown above in claim 14.

<sup>109</sup> Hensley at Col. 7, lns. 32-38.

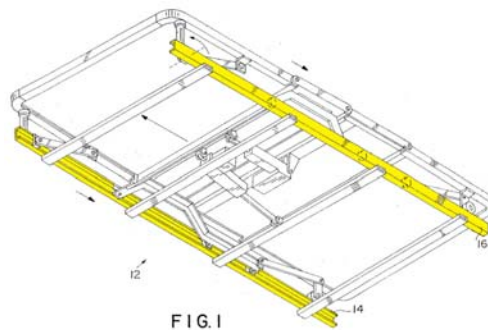
(10) Dependent Claim 16

Claim 16 is also dependent on claim 14 and includes the following additional limitation:

wherein the base frame is provided with two opposite guide tracks [11], and each of the first slide and the second slide of the linking frame is provided with two rollers rotatably mounted in the guide tracks of the base frame respectively so that the linking frame is movable between the guide tracks of the base frame.



As shown with regard to claim 14, Hensley anticipates claim 16 with its description of “inwardly facing channels 14, 16 of the base frame 12 [to] serve as longitudinally extending guides or tracks for rollers 32.”<sup>110</sup>



**Hensley**

<sup>110</sup> Hensley at Col. 4, lns. 58-61.

(11) Dependent Claim 17

Claim 17 is dependent on claim 14 and includes the following limitation “wherein the base frame is provided with two extension brackets each adjustably mounted on the respective guide track.” These extension brackets are only mentioned twice in the specification of the ’100 patent and the specification gives no further description.<sup>111</sup> Hensley anticipates claim 17 by its description of extension brackets in the form of four vertically-adjustable corner posts 126.<sup>112</sup>

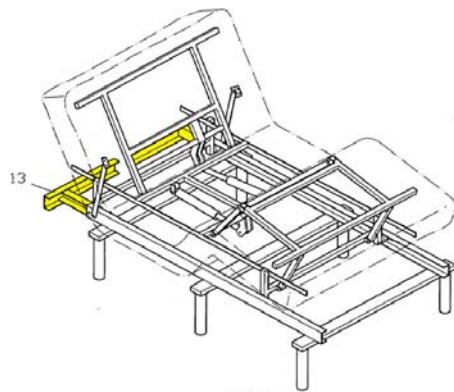


FIG. 6

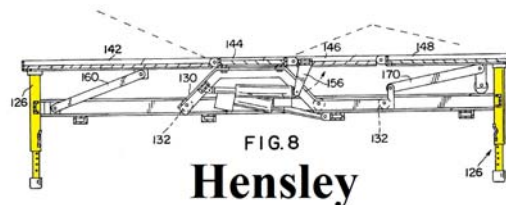
**'100 Patent**

FIG. 8

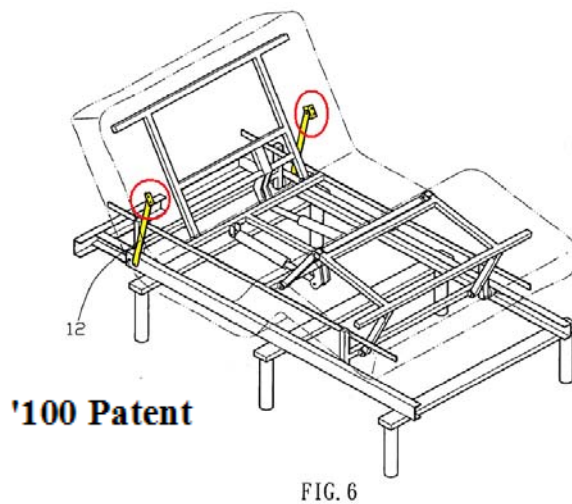
**Hensley**

<sup>111</sup> '100 patent at Col. 1, lns. 41-43; Col. 3, ln 40.

<sup>112</sup> Hensley at Col. 7, lns. 10-11.

(12) Independent Claim 18

Independent claim 18 is identical to claim 1, but further requires that “each of the two first links has a first portion pivotally mounted on the base frame and a second portion pivotally mounted on the first portion of the cushion.” In Stroud, as described above in section IV.C.1.4, the equivalent “two first links” are pivotally mounted between the base frame and the head frame. The last clause of claim 18 of the ’100 patent requires, however, that the first links are mounted “on the first portion of the *cushion*.” This “mounting” is shown in the ’100 patent’s figures, circled in red:



Such a mounting is impracticable and unworkable. “Pliable mattress cushions” meant for use as sleeping mattresses simply do not have the support in them to attach rigid (likely metal) objects.<sup>113</sup> Moreover, in one part of claim 1 it describes the “two first links” as “pivotally mounted between the [1] base frame and [2] the first support frame.” If the two ends of the links are mounted on the “base frame” and the “first support frame,” there is no end left to mount on the cushion as claim 18 requires by its plain language.

<sup>113</sup> Stein Decl., at ¶ 54.

Nevertheless, to the extent the Court finds that indirect “mounting” of the links onto the cushion through other frame parts or boards meets the limitations of claim 18, Stroud discloses mounting the links to a “lift roller” that supports the “underside 107 of the head board 76”<sup>114</sup> to the same effect. Likewise, Hensley anticipates claim 18 because “[t]he upper body frame section 42 is connected by links 60 to the head ends of the side rails 14, 16 by pins 60’, 60’”<sup>115</sup>. Though this “connection” is very indirect with regard to the mattress – the links are connected to a frame section, which supports the boards, which in turn support the mattress – if the Court finds such an arrangement can infringe claim 18, it likewise anticipates claim 18. Int’l Seaway Trading Corp., 589 F.3d at 1239 (“that which infringes, if later, would anticipate, if earlier”) (quoting Peters v. Active Mfg. Co., 129 U.S. 530, 537 (1889)).

### **CONCLUSION**

For the foregoing reasons, the Defendants respectfully request that the Court grant summary judgment as to (1) non-infringement (both literal and under the doctrine of equivalents) of claims 1-18 of the ’100 patent, and (2) invalidity of claims 1-18 based on anticipation by Stroud and/or Hensley. Unless mooted by the above rulings, Defendants alternatively request that the Court enter summary judgment that the “one arm” beds do not infringe the ’100 patent either literally or under the doctrine of equivalents. Defendants further request any other relief the Court finds just or due.

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<sup>114</sup> Stroud at Col. 5, Ins. 52-59.

<sup>115</sup> Hensley at Col. 5, Ins. 65-66.

Respectfully Submitted,

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/s/ Michael A. Albert